

Economic Implications of Conflict and Inconsistency in the Beef Marketing System: The Producer-Feeder Subsector

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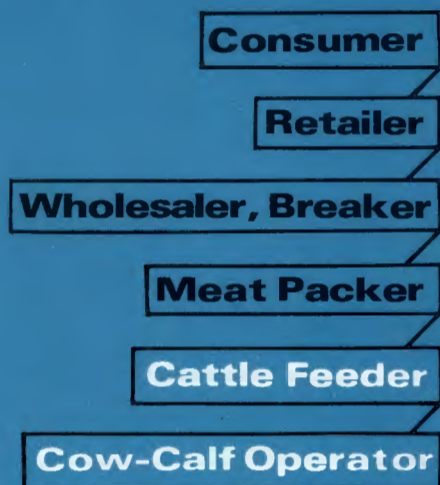


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P. James Rathwell and Wayne D. Purcell*

The production and feeding of cattle is of increasing importance to Oklahoma's economy. In 1971, Oklahoma January 1 beef cow inventories totaled 2,188,000 [1]. In 1971, there were approximately 587,000 head of fed cattle marketed in Oklahoma [2]. The 1971 levels constitute increases over 1960 numbers by 60 percent in cow inventories and 310 percent in fed cattle marketings.

Figure 1 shows the rise in per capita consumption of beef between 1955 and 1971 in the United States. This pattern of growth in the demand for beef will continue to have a substantial impact upon the Oklahoma cattle industry. Continued growth and development is anticipated by analysts who have examined the situation and tried to project future developments [3, 6].

The specific impact of the livestock industry in Oklahoma can be seen from the employment and income multipliers developed by Doeksen [4]. The employment multiplier for livestock products is 2.37. Interpretation of this multiplier means that for each man-year directly employed in livestock production for delivery to final demand, a total of 2.37 additional man-years of employment are generated throughout the state's economy. The income impact from livestock is 2.89. This income multiplier indicates that for each additional dollar of production income directly generated, a total of \$2.89 is generated throughout the entire Oklahoma economy.

Progress in terms of efficiency and improved technique in the production of beef has been an important stimulus to the beef industry and

Research reported herein was conducted under Oklahoma Experiment Station Project Hatch 1423.

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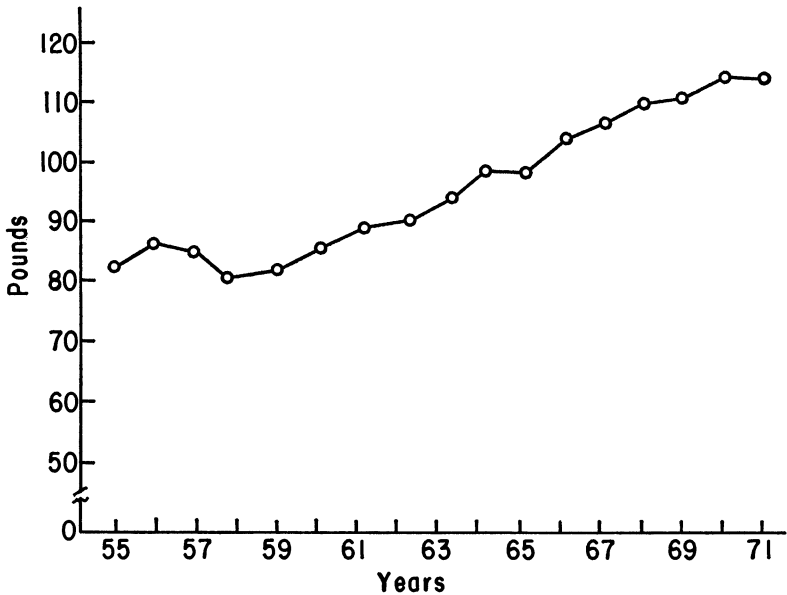


Figure 1. U.S. Per Capita Consumption of Beef, Pounds, 1955-71

Source: *Livestock and Meat Statistics*, Stat. Bul. No. 333, USDA, 1955-70, and *Livestock and Meat Situation*, USDA, Feb., 1972.

to the Oklahoma economy. However, equivalent progress has not been made in moving toward more effective marketing procedures. Lack of proficiency in marketing can offset much or all the advantage accruing from efficient production. A progressive orientation and set of procedures in marketing will prove important to the continued growth and viability of the beef business in Oklahoma.

The Nature of the Problem

The beef marketing system can be typified schematically as shown in Figure 2. The intent of Figure 2 is to suggest that the beef marketing system is comprised of several interrelated stages of activity.

A binding input-output relationship ties the stages together. For example, the output at the cow-calf level (the feeder calf) becomes input to the cattle feeder. The possibility of a problem emerges at this point. When the various stages or levels of activity are under the control of different managers, as is true in an exchange system, there is no guarantee of interlevel coordination. And if there is little interlevel coordina-

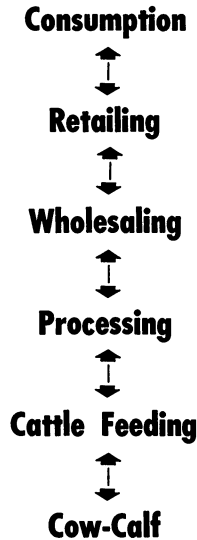


Figure 2. Interrelated stages of activity in the beef marketing system

tion, there is little input-output coordination—meaning the inputs provided by one level may or may not match the needs of the technically related level of activity. In the context used here, the feeder calf and related production practices may or may not be what is best suited to the needs of the cattle feeder.

When the marketing system is viewed in this way, the need for attention to the interlevel dimensions is readily apparent. But recognition of this need is not new; Kohls was calling in the 1950's for market researchers to adopt a "systems approach" and stop looking at single levels of activity as if activity at that one level were independent of the rest of the system [5]. Little was done, however, and Shaffer was prompted to make similar pleas in the late 1960's [8]. There remain problems of lack of interlevel or vertical coordination, and much attention is needed to this dimension of the marketing system.

Purpose of the Study

The producer-feeder subsector of the beef marketing system is the focal point of attention in this study. The primary objective was to isolate, and infer the economic implications of, goal conflicts and operational inconsistencies in this subsector of the beef marketing system. More specifically the objectives were as follows:

1. To identify decision-making criteria which influence buying

and selling activities by management at the feeding and producer levels;

2. To identify future trends, practices, and attitudes of management and infer their implications to the efficiency of the marketing process;
3. To identify interlevel goal conflicts and operational inconsistencies within the producer-feeder subsector of the beef marketing system; and
4. To infer the implications of selected conflicts and/or inconsistencies to the level of coordination achieved by the producer-feeder subsector of the Oklahoma beef marketing system.

These objectives were established employing a working hypothesis that (1) significant conflicts and inconsistencies do exist, and (2) that isolation of such conflicts or inconsistencies and their implications can provide the start of a basis for improved interlevel coordination.

Procedure

One of the primary reasons for the lack of research into the issue of interlevel coordination is the difficulty in developing an appropriate procedure or methodology. To fulfill the objectives of this study a relatively simple but somewhat unique procedure was developed.

As a part of this methodology the available store of knowledge was used to select a total of six dimensions of the total interaction between the producer and feeder. Identification of each dimension was equivalent to suggesting that conflicts or inconsistencies lie along that dimension. The six dimensions chosen were: (1) overall goal of operation, (2) current and future producer operating characteristics and marketing practices, (3) source and utilization of price information, (4) product characteristics and product valuation, (5) timing of the buying and selling activity, and (6) producers' knowledge of feeder and packer decision processes. Questionnaires were designed, based upon these six dimensions, to explore the decision processes of the two groups.

Two separate but related questionnaires were utilized. This was accomplished through a "mirror image" type of questioning designed to probe the same dimensions but from the viewpoint of the producer and feeder respectively. For example, three pictures of feeder steers were shown to both producers and feeders. The weight and quality grade of the steers were described as being identical. Each individual was asked to rank these animals (1, 2, 3) using the characteristics of frame and degree of finish. Each was asked to indicate which animal they would like to be selling (producer) or buying (feeder) at the current time. In this manner questions dealing with similar subject matter were asked to both

producer and feeder on separate questionnaires to aid in the isolation of conflicts and/or inconsistencies within the producer-feeder subsector being studied.

In a stratified random sample 46 producers and 46 cattle feeders were surveyed using personal interview procedures. More detailed information about the procedure employed and the breakdown of the two samples can be found in the M.S. thesis by Rathwell [7]. Tables 1 and 2 show the number of feeders and packers interviewed by size of operation. As noted earlier, a stratified sampling procedure was employed to insure the large operations would be represented.

The Survey Results and Implications

The questionnaires provided detailed information concerning the six "dimensions" identified. The results will be summarized briefly to indicate the nature of the goal conflict and operational inconsistencies which were isolated. Attention will also be directed to the possible economic implications of the conflicts and/or inconsistencies.

Overall Economic Goal of Operation

The majority of feeder cattle producers viewed themselves as producing a raw material designed to meet the needs of the feeders. Con-

Table 1. Distribution of the Sample Producers by Size of Operations

Size of Operation (Head)	Number of Operators Interviewed	Number of Feeder Cattle	Average Number of Feeder Cattle Per Operator
0-250	11	1,599	145
251-500	11	4,270	388
501-750	11	7,041	640
751-1000	7	6,473	925
>1000	6	9,051	1,584

Table 2. Classification of Feeders Interviewed by Size of Operation

Size of Feedlot (One-Time Capacity)	Number of Feeders Interviewed	Number of Cattle Fed
0- 500	12	4,125
501-1,000	6	4,600
1,001-5,000	15	34,850
> 5,000	13	195,500

versely, the feedlot operators indicated they did not feel the producer was attempting to supply an animal which would meet the feeders' requirements. The feeders felt the producer was and is attempting to meet the producers' own standards of excellence and quality (Table 3).

Different criteria are apparently used to determine the appropriate role of the producer in providing an input for the feeder. Such differences in valuation of animal characteristics makes estimation of the value of the feeder animal as an output of the producer and input to the feeder difficult at best.

The development (or lack of development) of a usable input becomes a determinant of the realized level of coordination between the producing and feeding stages. In pursuing a production plan oriented toward a set of animal characteristics not always desired by the feedlot operator, the producer accentuates the problem of coordinating objectives and activities between the two stages.

The possible implications of this inconsistency concerning what characteristics are important are manifold. The inability of feeders to procure suitable animals makes difficult any attempt to maintain a continuous flow of animals of consistent quality into the feedlot. Fluctuations in the supply of animals meeting the feeder's minimal standards contributes to price variability. Increased costs of feeding an undesirable animal to achieve the feeder's normal selling weight and/or quality grade may also be incurred. The producer, in turn, receives a more variable—and possibly smaller—income stream than would be probable if more consistency in goals between the two levels could be realized.

The unpredictable supply may also force the feeder to seek an alternative source of feeder cattle to protect against supply fluctuations and insure a more usable input. Structural change may come through an effort to integrate backwards to guarantee, through ownership, the type of input the open-market system does not provide. The continued buying of out-of-state feeder calves, if they are more suitable as inputs, is another avenue the Oklahoma feeder can and does follow. Another alternative, the use of contracts with specific clauses designed to guarantee desired animal traits, may be used more by the feeder.

Table 3. Producers' Overall Goal as Viewed by Producers and Feeders

Producer's Management Goal	Number of Respondents	
	Producer	Feeder
Produces a raw material to meet needs of the feeder	32	11
Produces an animal to meet producer's standards of excellence	13	35

Changes in Management and Marketing Practices

Changes in management practices are occurring within and between the producer and feeder stages. Some producers are experimenting with preconditioning practices such as vaccination, weaning, and bunk-breaking to facilitate the production of a more desired product. The feeder is also testing the possible merits attributable to such management practices. The ability of these practices to help promote a higher degree of coordination between producer and feeder depends upon the level and distribution of benefits accruing to the two parties.

More specifically, Table 4 shows the present producer management practices offered by producers and those desired by feeders. The producer has taken the initiative in implementation. The feeder has lagged behind in pushing for their utilization, apparently believing that he (the feeder) can complete such practices at less expense. Such is especially true with regard to immunization of feeder calves moving into the feedlot.

Table 5 indicates the possible changes in weaning and bunk-breaking in the future. Feeders appear to want these changes. The negative attitude of some feeders toward bunk-breaking is related to *the amount of grain fed* prior to arrival of an animal at the feedlot. The feeders felt that an animal accustomed to eating and drinking, prior to shipment,

Table 4. Producer Management Practices Implemented by Producers and Those Desired by Feeders over the Last Five Years

Management Practice Changes	Number of Respondents	
	Producers Implementing	Feeders Desiring
Immunization	21	0
Weaning	10	12
Bunk-Breaking	10	1

Table 5. Anticipated Changes in Management Practices In the Next Five Years

Changes	Number of Respondents	
	Producer	Feeder
Weaning and Bunk-Breaking		
Yes	15	29
Possibly	9	10
No	23	7

would gain weight faster. However, the feeders prefer an animal fed a high roughage ration. Too much grain in the ration apparently means a heavy feeder calf with "too much" finish going into the lot, thus decreasing the amount of expected gain per day that a feeder could achieve.

The feeders' desire for a weaned animal in the future is also favorable. Feeders indicated that sickness, stress and weight loss attributed to not weaning a feeder calf could partially be avoided if an animal was weaned prior to shipment.

The producers interviewed were generally less favorable toward continuation of, or increased, weaning and bunk-breaking. Their feeling was that the costs incurred in performing these management practices are not being recognized by the feeders in the price they pay for feeder cattle.

The preconditioning practices can contribute to interstage coordination if the feeder is assured they are implemented under conditions beneficial to him. On the other hand, the producer will perform the practices only if feeders will pay adequately for them. Under these limitations management practices can facilitate the building of an increased level of coordination which could be beneficial to both stages. At present, it appears (1) the absence of any guarantee of completion on such practices as immunization, and (2) the lack of willingness on the part of the feeder to pay what producers feel the management practices are worth prevent more widespread adoption of such practices.

There are also new and developing marketing practices. Both feeders and producers are trying different techniques in buying and selling feeder cattle. An increase in direct sales to feeders from producers is occurring, especially from the larger producer operations. The smaller producers interviewed indicated this selling method would not fit their small-volume operations since buyers require volume if direct contacts are to be made. Feeders buy direct because it increases their ability to obtain the type of animal they want at the time the animal is needed in their feeding processes.

Table 6 shows the selling and buying methods presently used by 41 producers and 42 feeders responding to this question. Eighteen producers

Table 6. Primary Producer and Feeder Marketing Arrangements

Market Method	Number of Respondents	
	Producer	Feeder
Direct Sale	18	4
Traders, Commission Men	10	11
Auction Sales	13	27

indicated they use the direct sales technique. Eleven of the 18 producers selling direct sell their cattle out-of-state. The remaining 23 producers sell their feeder cattle through traders or auctions.

The feeders surveyed indicated a broad range of methods used to obtain feeder cattle. Four feeders interviewed rely primarily upon direct sales; 11 rely upon trades; and 27 rely primarily upon auctions. The feeders smaller than 1,000 head one-time capacity use auctions generally as their primary input source. Feeders greater than 1,000 head reported they use direct sales and traders, especially direct sales, to a large degree.

The producers and feeders interviewed believe the direct sales method will account for most future market transactions (Table 7). Nineteen producers and 21 feeders indicated that direct sales would be the future trend in marketing feeder cattle. The idea of contracting along with the direct sale appeared to be favored more by the producer than by the feeder. Although 19 producers and 14 feeders agreed that more contracting would occur in the next few years, 12 producers and 22 feeders thought such would not be the trend.

Better relations between the producer and feeder through the use of new and different management and marketing practices is a relevant determinant of the degree of coordination between these levels. Actual contact in the selling activity through direct selling combined with management practices to improve the producer's product could bring about better alignment between the feeder's input needs and the producer's ability to meet those needs.

Pricing Model Employed by Producers and Feeders

Both producer and feeder are influenced by the level of feeder cattle prices, but different sources of price information are utilized by each stage to arrive at a specific price estimate for the feeder animals

Table 7. Future Marketing Methods Employed by Producer and Feeder

Marketing Methods	Number of Respondents	
	Producer	Feeder
Direct Sale		
Yes	19	21
Possibly	12	8
No	15	17
More Contracts		
Yes	19	14
Possibly	15	10
No	12	22

(Table 8). Most producers interviewed based their selling decisions upon prices quoted by neighbors and auctions. The responding feeders generally thought the best price information came from fed cattle prices reported by USDA or commercial reports.

To complicate the decision process, producers indicated that price is at times ignored. When the producer is faced with a "hold-sell" decision, the condition of his pasture becomes important and the current price of feeder cattle is not considered a highly critical factor. The introduction of pasture condition as a decision criterion hinders the working of the pricing mechanism since the supply and demand forces working within the market cannot affect the producer's pasture. Thus, "pasture conditions" becomes an exogenous variable which conditions the producer's decision and which—through its effect on weekly or monthly supply — becomes a barrier to interstage coordination by exerting an influence on price.

The level of coordination achieved is dependent upon a price which evolves from a common body of information available to buyer and seller. The reliance upon different sources of price information and the ignoring of price during particular time periods reduces the level of coordination achieved between stages. Price used in this manner permits market instability and accentuates the misuse of information carried by the market price.

The inability of price to reconcile differences between the stages may cause feeders to change their operating procedure to effect a change in market structure. A structural change aimed at increasing the power of price to reflect the needs of the feedlot may well evolve. Vertical integration and/or greater utilization of contracts may well bring about the conditions needed for price, or some substitute for price, to induce better coordination.

Table 8. Sources of Price Information Utilized by Producers and Feeders in Pricing Feeder Cattle

Sources of Price Information	Number of Respondents	
	Producer	Feeder
Private Sources	21	6
OKC Daily Auction Prices	17	9
Current Live-Cattle Futures Quotes	2	6
USDA and University Outlook Reports	0	1
Current Prices Seasonally Adjusted	1	4
Slaughter Cattle Prices	1	19

Product Characteristics and Evaluation of Product

Another potential and extremely important problem area facing the producer-feeder sector evolves from conflicting interpretation of the worth or value of a feeder animal. Conceptually, the valuation of an animal as a feeder is an accurate measurement of the product's worth at the producer stage. Subsequently, alteration to the product by the feeder changes the animal's value and this modification is reflected in the value-added price received by the cattle feeder.

The value of an animal to the feeder depends upon the weight gaining potential of the animal. As a general rule, the more valuable feeder animal is one with more frame and less finish. The producer, however, may base valuation of the animal on different factors. The producer values the animal at its present weight multiplied by price. Since weight is the more easily controlled, the producer may seek to maximize weight—which usually means a high degree of finish. Any difference in evaluation, unless it is accurately reflected through price premiums or discounts, creates market inefficiencies which lead to a breakdown of coordination between producer and feeder.

The producer and feeder were shown pictures of three 650-pound Choice feeder steers (Figures 3, 4 and 5). Each producer and feeder was asked to rank in order (1st., 2nd., 3rd.) which animal they would like to be selling (producer) or buying (feeder) today. A related question asked for a verbal indication of the factors important in valuation of a feeder animal. The factors given were age, breed, frame and degree of finish.

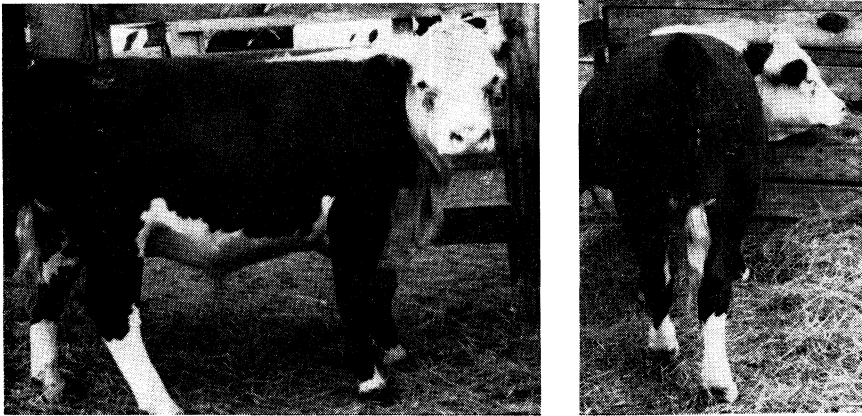


Figure 3. Animal No. 1, Selected to Show High Finish and Low Frame with Low Gain Potential

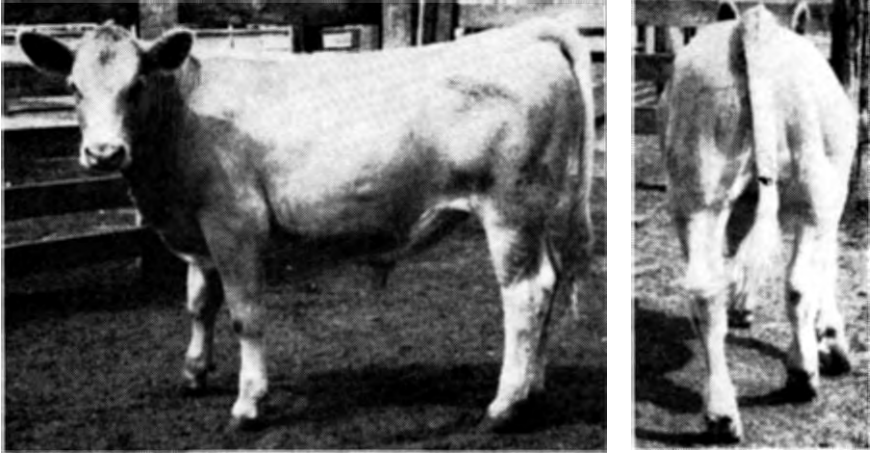


Figure 4. Animal No. 2, Selected to Show Average Finish and Average Frame with Average Gain Potential

These two questions were designed to help isolate differences in producer and feeder evaluation of characteristics determining the worth of a feeder animal. Table 9 indicates the relative weight attached by producer and feeder, on an aggregated basis, to the animal traits.

The producer respondents verbally choosing breed as an animals' most important attribute considered picture No. 1 most representative of the feeder calf they would like to be selling today. Producers verbally selecting frame as the most important attribute were split between picture No. 3 and No. 2. Finish-conscious producers chose pictures No. 1 and No. 2.

The feeders surveyed who verbally emphasized breed as a feeder calf's most important attribute specified picture No. 3 as most representative of the animal they would want to buy today. Feeders choosing frame

Table 9. Aggregated Producer and Feeder Verbal and Pictorial Responses to Most Desired Animal Characteristics

Verbal Indication of the Most Important Characteristic	Number of Respondents Selecting					
	Producers			Feeders		
	Picture			Picture		
	No. 1	No. 2	No. 3	No. 1	No. 2	No. 3
Breed	8	0	2	2	1	7
Frame	4	12	11	4	8	11
Finish	2	2	1	2	5	1

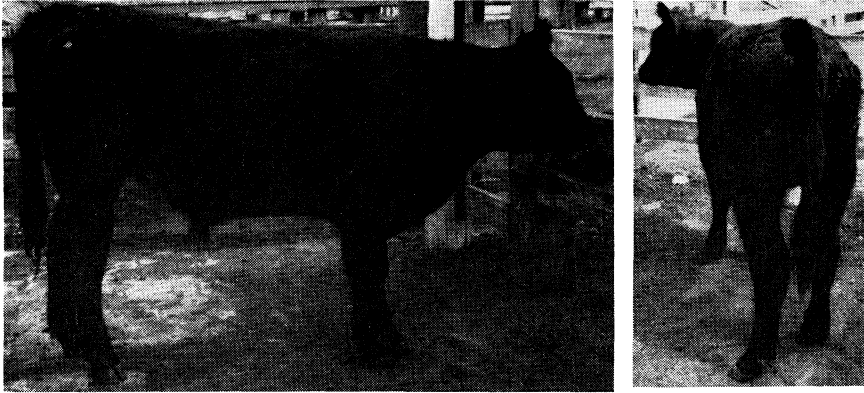


Figure 5. Animal No. 3, Selected to Show Low Finish and High Frame with High Gain Potential

selected picture No. 3 first then picture No. 2 and finally picture No. 1. The feeders specifying finish chose picture No. 2, No. 1 and then picture No. 3.

On the surface, the analysis appears to show a fairly consistent attitude between producer and feeder toward frame and finish. Fourteen of 42 producers chose picture No. 3 and 14 the "trade-off" animal picture No. 2. Nineteen feeders selected picture No. 3 and 14 picture No. 2. However, the aggregation of producer and feeder responses has concealed part of the problem. A better indication of the bearing comparable evaluation (or lack thereof) of animal attributes has upon inter-stage coordination is seen when producer responses are related to the producer's operational structure (Table 10). Similarly, feeder responses appear better related to their geographic location (which for all practical purposes is identical to size of operation). Table 11 shows these relationships.

The cow-calf man generally appears to favor the animal in picture No. 1. Nine of the 18 cow-calf producers responding selected picture No. 1, five selected picture No. 2, and four selected picture No. 3. Table 10 shows the verbal response of these 18 cow-calf operators with regard to breed, frame and finish. Note that six of the nine who preferred picture No. 1 voiced an opinion that breed is the most important characteristic.

Similar information on the response patterns for the "combination" men and "stocker" operators is recorded in Table 10. An interesting aspect of the response pattern of the combination men is the apparent

Table 10. Producer Verbal and Pictorial Indications of Most Desired Animal Characteristics

Verbal Responses	Number of Responses to Pictures 1, 2 and 3 by Type of Operation								
	Cow-Calf			Stocker ¹			Combination ²		
	Picture			Picture			Picture		
	No. 1	No. 2	No. 3	No. 1	No. 2	No. 3	No. 1	No. 2	No. 3
Breed	6	0	2	1	0	0	1	0	0
Frame	1	4	2	0	6	6	3	2	3
Finish	2	1	0	0	1	0	0	0	1

¹The producer identified as a "stocker" buys light calves, carries them to higher weights on wheat pasture and/or grass, and resells. He owns no cows.

²The producer identified as a "combination" operator both owns cows and buys additional light calves to run on wheat pasture and/or grass.

Table 11. Feeder Verbal and Pictorial Responses to their Most Desired Animal Characteristics

Verbal Responses	Number of Respondents to Pictures 1, 2 and 3 by Areas								
	Panhandle			Northeast			Central		
	Picture			Picture			Picture		
	No. 1	No. 2	No. 3	No. 1	No. 2	No. 3	No. 1	No. 2	No. 3
Breed	0	0	0	2	0	0	0	1	8
Frame	1	4	5	0	0	3	3	4	2
Finish	0	1	0	0	1	0	0	1	0

inconsistency. Eight of ten respondents verbally chose frame but only three of the eight selected picture No. 3. Twelve of the "stocker" operators selected frame as the most important value-related characteristic. Six of these 12 chose picture No. 3 and six chose picture No. 2. It appears that the "stocker" operator, by virtue of his closer working relation with the cattle feeder, has a better understanding of the type of animal wanted by cattle feeders.

Table 11 reveals that the feeders who verbally selected breed as the most important value-related characteristic are located in the North-eastern and Central areas. The feeders most concerned about frame were the larger feeders located in the Panhandle area. Ten of 11 Panhandle feeders chose frame as the most important attribute. Picture choices were basically consistent—five selected picture No. 3 (the animal selected for frame and a low degree of finish) and four selected No. 2 (the "intermediate" animal with regard to frame and degree of finish.)

These inconsistencies within and between stages provides additional evidence of the problems which prevail. Meaningful communication of an animal's value through market price can be achieved only through use of criteria common to, and interpreted the same by, both parties to a trade. The survey results suggest this interpretation is not the same where the value or worth of a feeder animal is concerned.

Timing of Buying and Selling Activities

The feeders of greater than 1,000 head capacity, of which most are located in the western Oklahoma counties, indicated a buying objective of maintaining a continuous flow of feeder cattle into their lots at all times. The majority of producers interviewed recognized this problem and considered it their problem as well since it involved their output market. The producers also showed some willingness to help achieve a continuous feeder calf flow.

To determine the extent of willingness the producers and feeders surveyed were asked a question designed to isolate a monetary figure descriptive of their willingness. Both producers and feeders were to assume that they had contracted steers to weigh 700 pounds at \$32.50 per cwt. The producer is asked to release these animals to the feeder one month earlier at 650 pounds to meet the feeder's full-capacity objective. A total cost for carrying these animals one month on pasture (650 to 700 pounds) was given as \$5.00. The producer was asked what it would be worth to him to allow an earlier release. Conversely, the feeder was asked what he would pay for receiving the animals one month earlier.

A break-even profit figure (\$34.25) was calculated for the producer. (This figure would allow the producer the same amount of profit selling at 650 pounds as he would have received if he sold at 700 pounds.) Both producer and feeder were asked if this figure was sufficient, too high, or too low. On the average, the break-even profit figure (\$34.25) fell \$.12 per cwt. below what the producer considered a reasonable price (\$34.37) for such an arrangement with the feeder. The range of producer responses was from \$33.25 to \$35.75 with 40 of 43 producers at or above the break-even profit figure.

The feeders' average payment suggestion was \$33.33 per cwt. The responses ranged from \$32.50 to \$35.25. Nine feeders chose the break-even figure and 30 chose below. There was a \$1.04 difference (\$34.37 - \$33.33), on average, between how the producer and feeder viewed the value of maintaining a continuous flow of feeder cattle.

The monetary value attached to such moves is a relevant determinant of this subsector's ability to achieve a higher level of coordina-

tion through the timing of buying and selling operations. The producer's willingness to supply cattle at an earlier date is largely negated by the requirement of a price considerably above the break-even price. The feeder, who will receive the initial benefit of the continuous flow, is not willing to match even the break-even price. The expressed willingness by both groups is overweighted by the prices each group would require to effect such a flow mechanism.

Conceptually, the continuous flow should allow the feeder to operate with full pens and eliminate problems relating to variable capacity. This permits fixed costs associated with the feeder's operation to be spread over a greater volume of cattle. Also, the feeder who works on this flow principal may enjoy a cheaper cost per pound of gain from the lighter average weight of animals he receives. Both changes should allow the feeder a lower cost per pound of beef produced. The reduction in costs from utilizing a lighter animal and consistent volume should enable the feeder to pay a premium above the market price for the producer's willingness to maintain the flow and deliver the animal earlier.

The producer can benefit and lose from the earlier sale. Benefits arise from a curtailment of interest charges on cattle in his possession. Cost cuts are obtainable through decreases in time, effort, facilities and materials needed to operate.

Losses to the producer could arise from a possible drop in the producer's gross revenue received. The lighter weight calf will yield a smaller gross return unless a higher price compensates for the lighter weight. The problem facing the producer is whether or not the production cost reductions and/or higher prices are sufficient to overcome any decreases in gross revenue, maintaining the same or a higher net revenue position.

The producers interviewed appeared to believe that the cost reductions and/or price increases were not large enough to offset their gross revenue loss. The movement of cattle one month earlier, they felt, would decrease their net revenue position. This belief on the part of the producer would require the feeder to pay at least the break-even price to obtain the cattle at an earlier date. More complete understanding of the monetary implications of bringing feeder cattle in at a lighter weight, to meet needs of the feeder, would increase the likelihood of the feeder and producer working together to the possible mutual benefit of each.

General Market Performance

An efficient and effective marketing system provides each stage with an awareness of the functions performed by the other stages within the system. If this is the case, any change in the feeder's buying practices

and/or cost structure should be realized and pertinent actions implemented by the producer to adjust, if needed, his practices in the market. However, this situation does not always hold between the producer and feeder.

Producers' Knowledge of Feeder Operations

The producers interviewed were asked about the feeder's ability to operate with negative margins. The 40 producers responding, on the average, indicated that a feeder receiving \$30.00 per cwt. for a 1,100 pound Choice slaughter steer should be able to pay the producer \$32.28 per cwt. for a 650-pound Choice feeder steer. The overall range of responses was from \$29.00 to \$35.00 per cwt. Two producers were below \$30.00, five at \$30.00 and 33 above \$30.00.

Looking at the groups within the producers, the responding cow-calf men indicated an average price of \$31.88 with a range of \$29.00 to \$35.00. The "stocker" operators average estimate was \$32.86 with a range of estimates from \$32.00 to \$35.00. The combination men were in the middle with a price of \$32.22 and range of \$30.50 and \$34.00.

The feeders interviewed indicated that they could, on the average, pay \$31.49 per cwt. for this animal. The estimates ranged from \$28.00 to \$34.00. The distribution of feeder responses were: six below \$30.00, four at \$30.00, and 33 above \$30.00. The larger feeders located in the Panhandle ranged from \$31.00 to \$34.00 with an average of \$32.12. The Central area feeders averaged \$31.67 with a range of \$28.50 to \$34.00. The smaller Northeastern feeders averaged \$30.30 and ranged from \$28.00 to \$33.00.

It appears that only the larger Panhandle feeders feel they could operate with the average negative margin indicated by the producers as a whole. The Central and Northeastern feeders would be pushed to the limit of their price ranges to meet the price producers estimated.

The \$.79 per cwt. difference between the producer's average response (\$32.28) and the average price the feeders were willing to pay (\$31.49) leaves room for doubt as to the producer's knowledge of the conditions under which the feeder operates.

The producer exhibited greater understanding of the feeder's operating procedure when asked about the feeder's cost structure. Thirty-seven of 42 producers believed that a 50 percent curtailment in a 10,000 head feedlot's capacity would increase the feeder's cost structure. Five producers believed it would decrease or not affect the feeder's costs.

The extent of the cost increase did not receive such agreement. The range of cost increases ran from two percent to 50 percent. The average increase was 17.26 percent. The recognition of such a cut-back

in capacity as having a definite impact upon the feeder's cost structure is a point in favor of the producer. However, the variability in the actual increase leads one to believe that the impact of such a curtailment is not fully understood by the producer.

Producers' Knowledge of Packer Operations

The producer's knowledge of the packer's operation was also tested. Producers were asked to identify the primary pricing criteria they believed the packer uses to evaluate an animal. The purpose was to check the producers' understanding of the type of animal the feeder could sell most effectively.

Carcass cutability was considered the most important variable by the producer. Quality grade was second and dressing percentage was third (Table 12).

This is another point in favor of the producer. The cutability of an animal can and does affect the profit position of the packer if the packer can merchandise the high-cutability carcass at a higher price. Consequently, the packer may well pay more for the high-cutability animal. Percentagewise, the "stocker" operator realized this point more than the cow-calf and combination men. Six of ten "stocker" operators chose cutability of carcass as the packer's primary evaluation criteria while seven of 18 cow-calf men and four of seven combination men made such a choice.

When the influence of the packer's pricing criteria was checked against the producers picture response the progressiveness of the "stocker" operator was seen again (Table 13). Twelve of 13 "stocker" operators agreed that the packer's valuation criteria influenced the animal they produced with six choosing picture No. 2 and six picture No. 3. Seven of 16 cow-calf men chose picture No. 1, six picture No. 2 and three picture No. 3. If the No. 3 animal would in fact yield a carcass with higher cutability, the cow-calf people did not make a choice consistent with their response concerning cutability. The combination

Table 12. Primary Factors Producer Feels Influence the Price a Packer will Pay for an 1,100 Pound Choice Slaughter Steer

Factors Influencing Price Formation	Number of Respondents		
	Cow-Calf	"Stocker"	Combination
Cutability of Carcass	7	6	4
Dressing Percentage	4	0	0
Quality Grade	7	4	3

Table 13. Influence of Packer Animal Valuation Criteria upon Type of Animal Producer is Now Producing

Has Packer Animal Valuation Criteria Influenced Type of Animal You Now Produce	Number of Respondents								
	Cow-Calf			"Stocker"			Combination		
	Picture			Picture			Picture		
	No. 1	No. 2	No. 3	No. 1	No. 2	No. 3	No. 1	No. 2	No. 3
Yes	7	6	3	1	6	6	3	2	4
No	2	0	0	1	1	0	1	0	0

man was found to be in the middle with three operators saying the packer's criteria influenced them but they produced animal one, two produced animal two and four animal three. Again there appears to be some inconsistency within the producer level.

The misconceptions by the producer about the feeder and packer operating procedures increase the probability of inefficiency between stages. The feeling is given that the producer is aware of some problems in the other sectors but in many instances maintains an isolationist attitude toward their solution or only partially understands the problems.

Summary, Implications

The technical input-output interrelationships are not always recognized by entrepreneurs at the different levels of activity in the beef marketing system. Lack of interlevel or interstage coordination results and the level of efficiency of the marketing system, in terms of technical efficiency, pricing efficiency and informational flows is thereby affected.

The primary objective of this study was to identify, and infer the economic implications of, goal conflicts and operational inconsistencies within the producer-feeder subsector of the Oklahoma beef marketing system. Making participants aware of the existence and implications of such conflicts and/or inconsistencies should constitute a base from which improved procedures might emerge.

Dual or "mirror-image" questionnaires were administered via personal interview techniques to stratified random samples of 46 cattle feeders and 46 producers. Six dimensions of the total connection or input-output relationship between the feeder and producer were identified and examined in detail. Each questionnaire covered the same topic areas but from the operating perspective of the feeder and producer respectively. For example, the feeder was asked about the type of feeder animal he would prefer to be able to buy while the producer was asked about the type of feeder animal he would prefer to have to sell. Such a

procedure helped to identify conflicts and/or inconsistencies. Further questions probed the implications of such conflicts along the six pre-selected dimensions.

The Results of the Surveys

The working hypothesis that significant conflicts and inconsistencies exist was verified. The nature and implications of the problems uncovered along the six dimensions will be briefly discussed.

A. Overall economic goal of operation

Thirty-two of 45 responding producers believed they produce a raw material to match the needs of the feeder as opposed to producing to meet their own standards of excellence. The cattle feeders felt differently — 35 of the 46 interviewed believed that, in the final analysis, the producers' own standards were given primary importance. In effect, the feeders were saying "no" to the question of whether producers were trying to match the needs of the feeders.

Among the possible implications of such an apparent inconsistency are the following:

1. The feeders are confronted with a flow of feeder cattle which is not consistent with their raw material needs;
2. The per pound cost of feeding to the feeder's normal selling weight and/or quality grade may be increased;
3. The producer receives a more variable, and possibly smaller, income stream than would be probable if there were more coordination; and
4. Structural and/or procedural changes, involving vertical integration into feeder calf operations and contractual arrangements, may be initiated by feeders to help guarantee a more uniform supply of feeder cattle.

B. Changes in management and marketing practices

Over the past 5 years, producers have moved to implement such preconditioning practices as immunization, weaning and bunk-breaking. Feeders, however, respond with an emphatic "no" with regard to the desirability of immunization and bunk-breaking. Their reservations apparently arise from (1) lack of an acceptable guarantee with regard to immunization, which means they (the feeders) do it anyway, and (2) the tendency for producers to feed too much grain to cattle while getting them accustomed to the feed trough—which means a more heavily finished animal than the cattle feeders want.

Both immunization and bunk-breaking prior to moving cattle into the feedlots are known to reduce stress, decrease death loss, and cut down on the adjustment period—the period when the cattle are just moving back to pre-shipment weights—as the transition is made. Under the present circumstances, however, such management practices by the producers are not always being accepted nor, in most instances, is the producer paid adequately for those services. Again, the absence of coordination is the rule and not the exception.

Both groups expect to see direct movement of cattle to the feedlot and movement through dealers or order buyers as the marketing trend in the future. Direct movement will be most prominent for the larger operations. Thirty-four of 46 producers believe increased use of contracts would be probable or at least possible in the near future. Only 24 of the 46 feeders agreed.

More orderly arrangements between producer and feeder are needed. At present, costly and inefficient duplication of immunization often occurs because of the uncertainty and ambiguity in the way feeder cattle are marketed. Needed is a workable means of certifying certain management practices and/or specification of such practices and how they are to be performed in a binding contract. Continued failure to move in these directions, especially if direct movement of cattle increases as expected, will mean losing time, cattle and potential gain—all attributable to the conflicts and inconsistencies which preclude the needed interstage coordination.

C. Pricing model employed by producers and feeders

Producers tend to rely on private sources and pay little attention to slaughter cattle prices. Feeders are more concerned with slaughter cattle prices, tending to watch USDA or commercial reports of trade in slaughter cattle and the futures market for slaughter cattle as well as market news reports on feeder cattle. Apparently, not many producers fully realize the demand for feeder cattle is a derived demand and is tied to the outlook for slaughter cattle prices. Using different information bases does not help to assure mutually satisfactory price negotiations.

Producers, especially the cow-calf group, often put more importance in pasture condition than in price. Consequently, cattle coming off pasture are often seasonally “bunched,” a most undesirable state of affairs for the cattle feeder who looks for a continuous flow of cattle into his pens.

D. Product characteristics and evaluation of product

Perhaps the most important of all the dimensions selected, the

situation with regard to product valuation clearly documents the conflict and inconsistency which prevails between producer and feeder. In general, the two groups do *not* agree on what constitutes value in a feeder animal.

A series of pictures and related questions revealed a state of affairs as follows:

1. Producers, especially the cow-calf operators, selected a heavily finished animal which ran contrary to the selections and expressed needs of the feeders.
2. Within the producer group, the operator defined as a stocker operator (no cows, runs calves on grass or wheat pasture) who often sells directly to cattle feeders exhibited much closer agreement with feeders on which type of animal is the more valuable feeder animal.
3. Some producers who indicated, in response to the questions, that large frame with a low degree of finish is desirable chose the animal in the picture series which exhibited the opposite characteristics.
4. Most feeders, and especially the larger feeders, indicated a high frame-low finish combination was desirable and their choices from the picture series were consistent with those characteristics.

Clearly, there exists inconsistency between the two groups, and even *within* the producer group, as to what constitutes value in a feeder animal. The tendency for the stocker operators who, unlike the cow-calf man, often sell directly to feeders to better understand the needs of the cattle feeder is revealing. It appears that direct contact has succeeded where the price mechanism has failed—there has never been a set of effective price signals transmitted to cow-calf producers which discounted the overly finished calf by a magnitude sufficient to “get across to” the cow-calf man. If this is indeed a sound inference, and the evidence certainly supports such an inference, it constitutes a ringing criticism of the exchange system as it currently operates in the Oklahoma beef marketing system.

E. Timing of buying and selling activities

Both feeders and producers voiced support of the idea of maintaining a consistent flow of cattle into the feedlot. Most producers recognized this is important to feeders.

However, the expressed willingness to work together was negated by the reaction of the two groups to a realistic situation. Cattle were assumed to be contracted at \$32.50 for delivery at an average weight of 700 lbs. To deliver one month earlier at 650 lbs. to meet the needs of the buying feeder, producers indicated they would require a price

significantly above the price which would give the same profit per head as the contractual arrangement. On the other hand, many feeders were not even willing to match the break-even price.

Most producers and feeders tend to view changing the timing of cattle movements, meaning the scheduling of cattle into the lots, as a zero-sum game. There is little recognition such cooperation could be mutually beneficial to both parties, resulting in (1) lower costs to feeders in terms of procurement and average total costs of gain, and (2) some increase in returns to producers which could evolve if the feeder recognized and was willing to share the benefits of reduced operating costs.

F. Producers' knowledge of feeder and packer decision processes

To function effectively as part of the total system, each participant needs to understand the basic processes at related levels.

In general, producers were aware operating at or near capacity increased the feeders' costs but there was a wide range of opinion on how much the change would be for a given reduction in operating levels.

Producers' understanding of the implications of negative margins (feeder cattle prices above expected slaughter cattle prices) was less impressive. Many felt feeders could afford to pay, for a given type of feeder cattle, a price which would lead to unprofitable operations for the feeders.

Almost one-half of the producers recognized the theoretically important carcass cutability as being important to the packer's operation and pricing policies. Again, the difference of the group of stocker operators emerged—the stocker operators chose cutability more readily than the cow-calf operator and avoided completely the sometimes misleading variable, dressing percentage. Dressing percentage was a favorite choice of many of the cow-calf operators.

An Overall Conclusion

Though better quantitative measures of both incidence and implication are needed, there clearly exists conflict and inconsistency within the producer-feeder subsector of the Oklahoma beef marketing system. The differences extend beyond the legitimate conflict which characterizes any buy-sell situation. Lack of information, distrust, lack of understanding, narrow perspectives and the absence of in-depth perception are the rule rather than the exception. As a result, there is little interlevel coordination between the producer and feeder groups and progress in effecting a higher level of coordination must surely come if the exchange system as an organizational structure and as a mode of operation is to survive.

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