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ESTIMATED COST FOR MARKETING LAMBS
USING THE TELEPHONE AUCTION METHOD

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ESTIMATED COST FOR MARKETING LAMBS USING
THE TELEPHONE AUCTION METHOD*

Historically the terminal markets and auction markets have sold most livestock including lambs. New and more efficient concepts in marketing have been proposed and successfully used in marketing some livestock. The telephone auction has been used quite successfully in marketing hogs. For marketing lambs, it is relatively new. The costs of the physical transfer of lambs in this manner is thus unknown. The livestock auction market and terminal market have cost estimates available for their type of selling. By reviewing these cost estimates and considering the basic differences in the telephone auction, a reasonable and fair range of cost estimates can be derived for selling lambs by the telephone auction method.

The facilities required for the proposed operation are fundamentally a loading-unloading dock, scales, and large pens. Pens sufficient to hold 500 lambs would suffice, although enough pens for 1,000 lambs would be ideal. These facilities would be sufficient to handle the 800-1,200 anticipated lambs per week. Selling is anticipated for only about 12 weeks, or about 12,000 lambs to be handled. Consequently, the telephone auction sale would require the facilities for about $\frac{1}{4}$ of the year. The facilities in question would not be fully utilized during the lamb sales anyway, as May-July is normally a low volume period for the auction market. Therefore, adjustments must be considered for the facility usage rather than charging rates as if used for an entire year. The manpower required

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for the proposed operation would be 1 weighman and 1 yardman. The question now becomes, what is a fair price for these services. Let us look at cost estimates of other operations in an attempt to estimate the possible costs involved.

Research in West Virginia, Nebraska, Wyoming, and Washington has provided a working basis. Inflationary adjustments were made to update the results. Adjustments for portions of the auction markets to be used were estimated. The purpose of analyzing this previous research was to determine a fair charge for the telephone auctioning facilities for all parties.

Kuehn (1) conducted a study in West Virginia using 1967 and 68 data. He found that heterogenous species of livestock could be converted to a common livestock marketing unit (LMU) by using a ratio of one head of cattle equals 3 calves, or 4 hogs, or 5 lambs or sheep (1, p. 6). Then the average cost per LMU was obtained by dividing the total auction market cost per year by the number of LMU handled per year. Converting the anticipated sheep volume to LMU's indicates about 200 LMU's per week, or 2,400 LMU's annually. Results indicated that the mean average cost for firms handling less than 6,000 LMU's (30,000 lambs) was \$4.70 per LMU. This results in an average cost of \$0.94 per lamb. For firms handling 6,000-11,999 ^{LMU's} ~~lambs~~ the comparable figures were \$3.83 per LMU or \$0.77 per lamb. This included grading, tagging, penning, and all activities related to the auction itself. These costs will not be incurred in the proposed project, so consequently, they should not be charged against it. The same study by Kuehn found that 56% of the total cost was for labor. This is supported by other studies. It is estimated that only about 1/3 of the labor of the auction market will be required in the telephone auction.

Also, 100% of the utilities, insurance and bonds, and capital investments was allowed for the proposed project. About 50% of the office supplies would be required, but no feed, transportation, or market news service cost would be incurred by the auction market company. This resulted in the cost per lamb being reduced to approximately 40% of the auction market cost. The \$0.94 and \$0.77 auction market costs translated into \$0.376 and \$0.308 per lamb costs, respectively (Table 1). The inflation rate from 1967 to the present was estimated at 40%. This resulted in costs of \$0.510 and \$0.416 per lamb. This is one estimate of possible costs of the operation.

Another study by Kuehn (2) provided cost data for animal units by total cost per year for each cost sector.¹ These data were for an auction market with annual output of 9,240 animal units. Table 2 contains the data Kuehn used and provides the percentages of the market auction which might realistically be charged against the proposed operation. This evaluation indicated an equivalent of \$0.26 per lamb plus a land charge was incurred. When the 40% inflation rate was added, a charge of \$0.364 per lamb plus a land charge was derived.

Johnson (3) reported estimated costs for numerous methods of marketing. By using the concept of animal units his estimates for fed cattle were transformed into cost estimates for lambs. Johnson included yardage, feed, service, and commission charges in his estimates of the seller's direct cost using the terminal market and auction market. He estimated this cost for fed cattle at \$3.14 per head in 1969. This was for a market selling over 25,000 animal units. For lambs this would be \$0.628 per lamb.

¹Animal units are approximately the same as livestock marketing units.

Figuring 40% of this was chargeable against the proposed operation would result in a \$0.25 per lamb charge. Using a 30% inflation rate since 1969 results in a present cost estimate of \$0.325 per lamb. Admittedly this estimate is based on a large market having low marketing costs, so the figure should be viewed as perhaps somewhat low.

Johnson (3) found that the telephone auction method had an estimated direct cost to the producer of slaughter cattle of \$0.43 per head. Adjustments for lambs in this situation were much less than the figures used to convert livestock to equivalent animal units. The cost was estimated to be at most 1/3 less for lambs than for cattle. This suggests a charge of \$0.287 per head. Adjusting this by 50% inflation, brings the figure to \$0.373 per lamb.

The Agricultural Experiment Station at the University of Wyoming (4, p. 46) found terminal marketing costs for cows from 1959-65 to be \$2.81 per head in Billings, \$2.87 per head in Denver, and \$3.01 in Ogden. This converts to lamb costs by use of animal units of \$0.562, \$0.574, and \$0.602, respectively. Again using 40% of terminal marketing costs to estimate the cost of the proposed operation results in costs of \$0.225, \$0.230, and \$0.241 per lamb. Adjusting this by 50% inflation produces costs of \$0.338, \$0.345, and \$0.362 per lamb for the three respective areas.

The Washington Agricultural Experiment Station (5, p. 18) found the cost of marketing cattle at \$3.8236 per head. Of this, \$0.5413 was for transportation leaving a cost of \$3.2823 per head for the marketing agency. This converts to a cost of \$0.656 per lamb. Then by applying the 40% usage factor, the proposed operation would have an estimated cost of \$0.262. This was 1972 data so only 10 percent inflation was included.

This brought the total current charge to \$0.288 per lamb.

The evaluations of marketing agencies presented in this paper suggest that the estimated cost of the market operation being considered should range from approximately \$0.288 to \$0.510 per lamb. The average of all estimates in this paper was \$0.369 per lamb. However, all of the figures were merely rough estimates since no actual program of the proposed type was operational. Complete records of similar type telephone auctions tended to be incomplete. Therefore, the estimates should not be construed to be highly accurate. They should, however, present an idea of the general area of cost per lamb.

Table 1. Cost Estimates for the West Virginia (1, p. 4) Auction Market and the Percentage and Cost Estimates for the Proposed Lamb Telephone Auction, 1974.

Item	Total Cost Allocations					
	Proportion of total West Va. cost	Proportion of item cost allocated to telephone auction	Allocation of 94¢ West Va. cost ^a	Allocation of 77¢ West Va. cost ^b	Allocation of 94¢ cost to telephone auction	Allocation of 94¢ cost to telephone auction
	%	%	¢	¢	¢	¢
Labor	56.1	33.3	52.7	43.2	17.5	14.4
Utilities	3.5	100.0	3.3	2.7	3.3	2.7
Investment cost	21.1		19.8	16.2		
Depreciation	5.6	33.3	5.3	4.3	1.8	1.4
Insurance & bonds	5.4	100.0	5.1	4.2	5.1	4.2
Taxes	5.9	33.3	5.5	4.5	1.8	1.5
Interest	3.7	33.3	3.5	2.8	1.2	0.9
Capital improvements	0.5	100.0	0.5	0.4	0.5	0.4
Operating cost	11.7		11.0	9.0		
Repair & maintenance	2.5	33.3	2.4	1.9	0.8	0.6
Office supplies	3.2	50.0	3.0	2.5	1.5	1.25
Feed	0.5	0	0.5	0.4	0	0
Transportation	0.8	0	0.8	0.6	0	0
Market news service	2.9	0	2.7	2.2	0	0
Lease cost	1.7	33.3	1.6	1.3	0.5	0.4
Miscellaneous	7.6	33.3	7.1	5.9	2.4	2.0
Average auction market cost per lamb			93.9	76.9	36.4	29.7
Estimated telephone auction cost plus 40% inflation					51.0	41.6

^aAverage cost of auction markets selling less than 6,000 LMU.

^bAverage cost of auction markets selling between 6,000 and 11,999 LMU.

Table 2. Cost Estimates for West Virginia (2) Auction Market and Percentage and Cost Estimates for the Proposed Lamb Telephone Auction, 1974.^a

Item	West Virginia	Allocation of Costs to	
	Cost/Animal Unit	Proposed Operation/Animal Unit	
	¢	%	¢
Labor cost	203.0		
Yardmen & ringmen	70.5	33.3	23.5
Weighmen	13.1	100.0	13.1
Graders	2.3	0	0
Secretaries	16.6	33.3	5.5
Auctioneers	29.6	0	0
Bookkeeper	11.8	33.3	3.9
Manager	59.1	33.3	19.7
Fixed costs			
Depreciation (bldg.)	38.8	33.3	12.9
Depreciation (office eq.)	2.5	33.3	0.8
Telephone	5.4	100.0	5.4
Electricity	4.4	100.0	4.4
Water & sewage	0.3	100.0	0.3
Heating	1.5	100.0	1.5
Operating costs			
Supplies	11.5	33.3	3.8
Losses	8.1	33.3	2.7
Market news service	16.2	0	0
Feed	1.0	0	0
Repairs & maintenance	11.1	33.3	3.7
Miscellaneous	24.2	33.3	8.1
Taxes	12.8	33.3	4.3
Interest	43.3	33.3	14.4
Average cost per animal unit	384.0		128.0
Average cost per lamb	76.8		25.6
Plus 40% inflation	107.5		.364

^aDoes not include a charge for land.

BIBLIOGRAPHY

- (1) Kuehn, John P. "Livestock Auction Market Costs in West Virginia," West Virginia University Agricultural Experiment Station, Bulletin 601, May 1971.
- (2) Kuehn, John P. "Cost and Efficiencies of Model Livestock Auctions in West Virginia," West Virginia Agricultural Experiment Station, Bulletin 606, December 1971.
- (3) Johnson, Ralph D. "An Economic Evaluation of Alternative Marketing Methods for Fed Cattle," Nebraska Agricultural Experiment Station, SB520, June 1972.
- (4) Ehrich, Rollo L., Richard A. Glandt, and James S. St. Clair. "Net Returns to Producers for Cattle Sold At Selected Terminals and Wyoming Auction Markets, 1959-65," Agricultural Experiment Station, University of Wyoming, Research Journal 24, December 1968.
- (5) Rehberg, W. A., R. J. Folwell, and O. S. Wirak. "Cattle Auction Markets in Eastern Washington," Washington Agricultural Experiment Station, Bulletin 786, November 1973.
- (6) Kuehn, John P. and E. Maclellan Wilson. "A Cost Analysis of the Livestock Auction Markets in West Virginia," West Virginia University Agricultural Experiment Station, Bulletin 600T, April 1971.
- (7) Bobst, Barry W. "Area Comparisons of Auction Market Selling Costs and Returns for Cattle and Calves in the South," Southern Cooperative Series, Bulletin 154, March 1971.
- (8) Agnew, Donald B. "Cost of Marketing U.S. Livestock Through Dealers and Public Agencies," U.S. Department of Agriculture, Marketing Research Report No. 988, June 1973.
- (9) Engelman, Gerald, Everett Stoddard, and James Maetzold. "The Lamb Industry: An Economic Study of Marketing Structure, Practices, and Problems," Packers and Stockyards Administration, U.S. Department of Agriculture, P&SA Research Report No. 2, May 1973.