

COMPUTERS FOR FEEDER CATTLE MARKETING

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Over the past several decades, the trend in livestock marketing has been away from terminal markets and toward local sales, either through privately-owned auctions or direct selling from the farm or ranch. This trend has resulted in a relatively large number of geographically dispersed, low-volume markets as compared to terminal markets.

These geographically dispersed local markets are characterized by volumes of livestock too small to attract large numbers of bidders. Because the markets are scattered and have low volume, it is expensive for buyers to participate at each one. Price manipulation potential is enhanced in low-volume markets where few buyers and sellers meet. Also, retrieval of market information from these markets is relatively expensive.

Computer technology makes it possible to centralize the price negotiation process in marketing livestock without the costs involved in physically centralizing buyers, sellers and livestock. Using a computer to tie local markets together gains the advantages of the high-volume terminal markets while maintaining the convenience of local sales. Centralization of price negotiation "broadens" the market and assures that each seller's livestock is exposed to many competitive buyers.

Through a computer, buyers and sellers statewide, or even from a multistate region, can be linked for marketing purposes. Buyers can be better informed about sellers offering livestock without the expense of traveling to several local markets. Sellers can have the advantage of watching the market move and knowing prices and terms of trade for all previous transactions. Knowledge of

supply and demand conditions can increase for both buyers and sellers.

How Computer Marketing Works

Computer marketing allows flexibility for specific marketing and price negotiation procedures to fit each situation.

Sellers would "watch the market" by going to a television-like screen, called a cathode ray tube (CRT), which would display the latest market transactions. Information from the nearest CRT unit also could be obtained by phone. A CRT unit also would be located in the buyer's office.

Livestock producers, the sellers, would check their local computer marketing terminal to determine current market conditions for the class of livestock they are preparing to market. This would provide the seller with information to assist with pricing decisions.

The seller's next step would be to describe the livestock according to standards accepted by the industry. A third-party grader may be necessary to maintain confidence in the description. The seller then would contact a nearby terminal station to list the livestock and dictate pricing instructions, such as a "no sale" or minimum acceptable price.

Offers of livestock of particular grades, weights, breeds, ages, sexes and classifications could be grouped together. A buyer could request the computer to display these various groups and have the offerings within a group listed and described separately. Through the same network, buyers could bid on offerings within the group until a sale is made or a time limit is reached.

Specific delivery points and delivery regulations can be standardized. To add to transportation efficiencies and cost savings to buyers, the description and listing of livestock would include the seller's delivery point. This would provide buyers a means of lowering transportation costs and, in certain circumstances, encourage them to

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bid more on lots in areas where they already have committed trucks.

Possible Trading Procedures

Two trading procedures would provide flexibility to traders. One procedure would be for sellers with less than truckload lots of livestock. A second method would be for producers with truckload lots (42,000 pounds for feeder cattle) or more of livestock marketings.

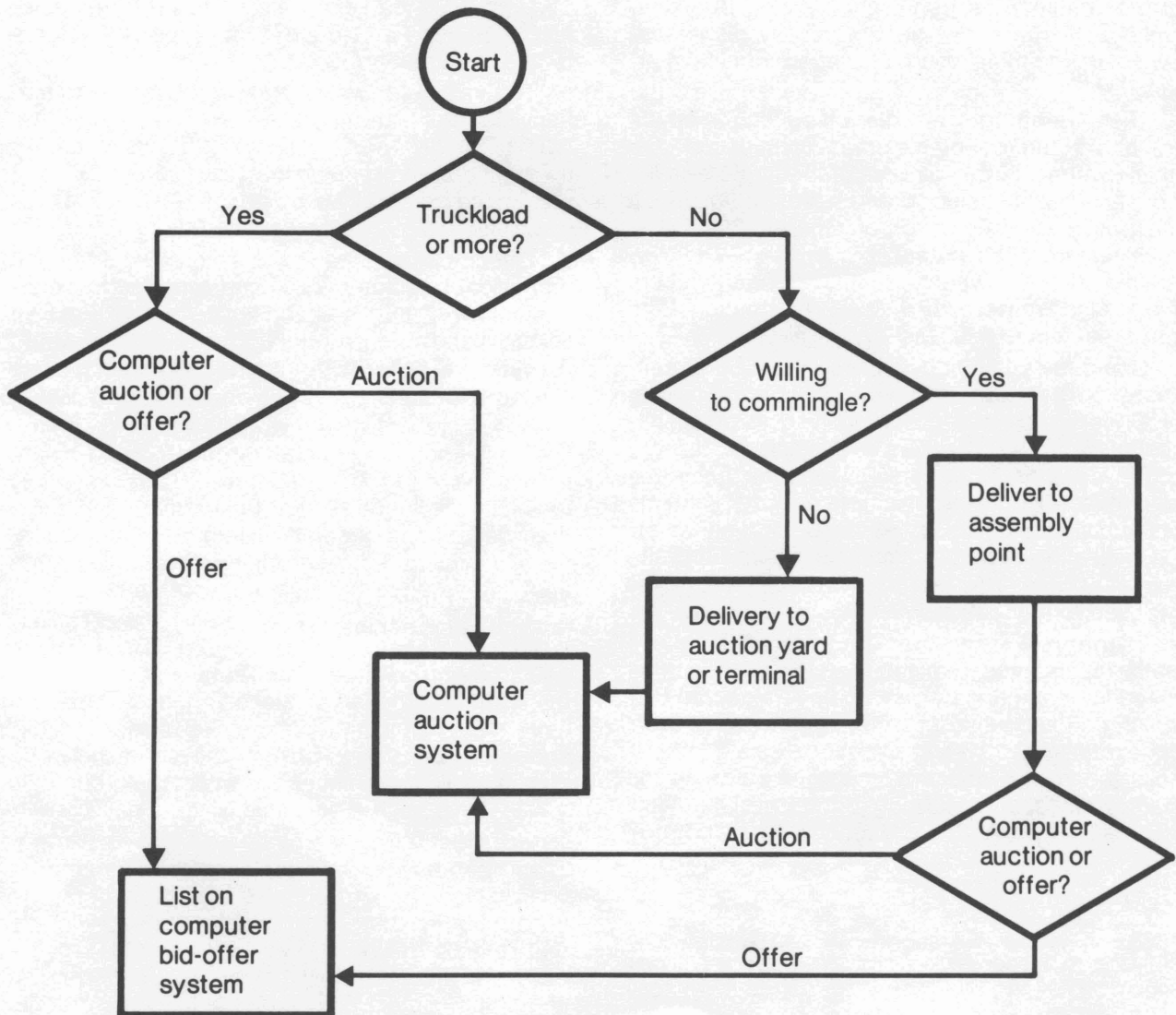
Small-lot marketings would use the "auction system" and the large, truckload marketings would use either the "offer system" or the "auction system." A seller decision chart for the two systems is shown in Figure 1. It would be possible for producers marketing small lots to use the offer sys-

tem if they are willing to commingle their livestock at some collection point. In either system, the description of livestock would be transmitted from the base computer over a network of dedicated telephone lines and displayed to traders on the CRT unit.

The display information could be composed of both "hard" data and "soft" data. The "hard" data CRT display to potential buyers would consist of quantitative descriptions of livestock. Items such as sex, weight, age, breed, skeletal size, thriftiness and grade would be used to describe each lot.

Livestock would be described by third-party graders. The "hard" data supplied by the third-party grader and the seller would be displayed at the top portion of the CRT or above a dashed line

Figure 1. Seller decision chart for an electronic marketing system.



(Figure 2). The "soft" data, which might be any information the seller thought would merchandise the livestock would be displayed below the dashed line as shown in Figure 2. The "soft" data or information would not be checked or verified by the third-party grader. A buyer interested in a particular lot could call for a more detailed description as illustrated in Figure 3. Various owners of lots of livestock of similar description commingled at the auction yard, designated assembly area or an individual's ranch would be identified separately.

Auction System: The sellers using the auction system would be sellers of small lots, or of large lots desiring immediate sale. The livestock would be listed and graded by the third party and entered onto the system at a predetermined time for specific classes of livestock. Once the lot is

offered over the system, buyers would have a specific period for bidding. At the end of the prescribed bidding period, the seller could accept the auctioned price or, if the bid price was lower than a "no-sale" price, the seller could reject the bid. The seller would have the option of setting a no-sale price when listing the cattle.

There are two bidding procedures used with the auction system. One procedure, called "one bid," allows a single bid per lot, per buyer during the prescribed bidding period. The second procedure, called "progressive bidding," allows multiple bids per lot, per buyer during the bidding period. In both procedures, buyers would be able to see other bids displayed on CRT units, but would **not** know the identity of other bidders. Livestock would go to the highest bidder in either procedure, **if** these bids equalled or exceeded the

Figure 2. Proposed CRT display to buyers for feeder cattle showing "hard" and "soft" data, auction "blind-bidding" system for buyers.

LOT DESCRIPTION	
Lot No.: A211 No. of Cattle: 45 Grader No.: 18 Date Described: 5 JUN 79 Description: Sex: 34 Steers Age: Yearling Predominant Grade: Common Name: Crossbred #1 Okie USDA Grade: Medium - 2	Location: Sealy Auction Time and Date of Delivery: 1430:4 JUN 79 Delivery Location: Sealy Auction Predominant Breed: $\frac{3}{4}$ English $\frac{1}{4}$ Brahma Est. Weight Range: 650-740 Est. Typical Weight: 680 Predominant Color: Mostly Black Predominant Confirmation: Medium to heavy bone with moderate length
<hr/> OWNER SUPPLIED INFORMATION: 1. On rye grass 45 days prior to listing. 2. All males were knife castrated. 3. Parasite control: Grubs treated with Warbex, Fall 1977, Cyanamid (manufacturer).	

Figure 3. Proposed CRT display to buyers for feeder cattle showing individual listings within a lot.

INDIVIDUAL DESCRIPTION									
Lot No. J385									
Location: Sealy Auction									
Sex	Hd	Est. WT	Approximate birthdate		Color	Breed	USDA Grade		Common Name
St.	43	670	Sp.	77	Bl. Baldy.	$\frac{1}{2}$ An. $\frac{1}{4}$ Hf. $\frac{1}{4}$ Bra	Medium	2	Crossbred #1 Okie
St.	5	650	Win.	77	Tiger St.	$\frac{1}{2}$ Hf. $\frac{1}{4}$ S.H. $\frac{1}{4}$ Bra	Medium	2	Crossbred #1 Okie
St.	10	680	Win.	77	Red Baldy.	$\frac{3}{4}$ Hf. $\frac{1}{4}$ Bra	Large	1	Crossbred #1 Okie
St.	10	680	Win.	77	Red Baldy.	$\frac{3}{4}$ Hf. $\frac{1}{4}$ Bra	Large	2	Crossbred #2 Okie
St.	6	670	Fall	76	Bl.	$\frac{3}{4}$ An. $\frac{1}{4}$ Bra.	Medium	2	Crossbred #1 Okie
St.	11	740	Fall	76	Bl.	Brangus	Large	1	Crossbred #1 Okie

Figure 4. Proposed CRT display to buyers for feeder cattle on pasture, offer system.

LOT DESCRIPTION	
Lot No.: J038	Today's Date: 10 FEB 79
File Date: 2 FEB 79	Grader No: 09
No. of Cattle in Lot: 240	Date Described: 29 JAN 79
Location(s): Franklin, Texas	Elapsed Days: 12
Firm Offer Price: \$72.50	Nearest Official Scale No.: 3596
FOB Delivered to: Bryan, Texas	Miles From Origin: 28
Description:	
Sex: 240 Steers	Predominant Breed:
Age: Yearlings	Angus and Angus x Hereford 210
Predominant Grade:	Hereford 30
Common Name: #1 Okie	Est. Weight Range: 650—850
USDA Grade: Medium - 2	Est. Typical Weight: 750
	Predominant Color: Black
	Predominant Confirmation: Medium to heavy bone with moderate length.
<hr/>	
OWNER SUPPLIED INFORMATION:	
1. Steers placed on wheat and ryegrass last fall and will remain on same until delivery.	
2. All were knife castrated and dehorned, Fall 1977.	
3. Implanted with "Ralgro" prior to placing on grazing and in February 1978.	
4. Immunization: Blackleg — Malignant edema, Fall 1977, by Myzon (manufacturer).	

no-sale price entered by the seller. If no bids were made during the prescribed time or if the bids did not equal or exceed the no-sale price, a "no-sale" would be posted for that lot.

Offer System: A slightly different pricing system would be possible for livestock in lots of truckload size or larger and for lots where immediate sale would not be critical. The "offer system" would allow larger lots of livestock to be listed and cataloged on the system. For this alternative, a third-party grader would go to the farm or ranch to list and describe the livestock and enter the data on the computer system. Description would be the same as utilized for the "auction system" shown in Figure 4. This information would be stored in an active "for sale" category for assessment by buyers at any time.

Through the "offer system," a buyer making a bid on a particular lot would enter the lot number, bid price and desired delivery point on his CRT terminal. The terminal nearest the livestock producer would automatically produce a copy of "notice of bid" as shown in Figure 5. The operator of the terminal near the livestock owner would contact the owner by telephone to notify him of the bid. The owner would have a specified time to accept or reject any bid.

Title Transfer: When a sale is consummated in either system, a printout at both the buying and

selling CRT terminals would verify the sale with a "certificate of sale" as shown in Figure 6. In addition, the buyer also would be furnished a copy of the individual description of the lot as illustrated in Figure 3. Title transfer would be made at the time of official weighing. Before making a bid, the buyer would know where the livestock would be delivered and weighed. Buyers would be responsible for shipments of cattle from the official sale point to the final destination, unless other agreement is made.

Figure 5. Proposed hard copy display of bid to buyer and seller for feeder cattle on pasture, whole lot bid.

NOTICE OF BID (Whole Lot)	
Lot No.: J038	To: John Doe
Time: 1630	(XXX) XXX-XXXX
Bid No.: 85	
Bid Price: \$67.50	
FOB Delivered to: Bryan, Texas	
Bidder: Bill Jones	
363 Dade Street	
Amarillo, Texas	
Note to Owner:	
Failure to act on this offer invalidates offer in	
_____ period.	
(weeks, days, hours)	

Figure 6. Proposed hard copy, sale verification display to buyer and seller for feed cattle, auction or offer systems.

CERTIFICATE OF SALE	
Lot No.	
Price:	
Buyer: Bill Jones	Sale No.:
363 Dade Street	Time: 1630: 5 MAY 78
Amarillo, TX	Title Transfer Location:
Phone: (XXX) XXX-XXXX	Official Weighing
Auth. No.: J661M	Location:
Seller: John Doe	
RFD #3	
El Campo, TX	
Phone: (XXX) XXX-XXXX	
Auth. No.: S199D	

Advantages and Disadvantages of System

Computer marketing could be advantageous over some of today's systems, but it also has some disadvantages. The advantages are that computer marketing:

- Exposes offerings to many interested buyers
- Provides easy entry to many small markets for both buyers and sellers
- Increases marketing efficiencies through less transportation and lower procurement cost for buyers
- Equalizes marketing power — may raise prices to producers by increasing competition
- Improves health control measures and lowers disease loss because many livestock are not moved until after sale
- Furnishes instant and complete market information

Disadvantages are that computer marketing:

- Requires livestock description that may be difficult and unacceptable to buyer and sellers
- Listing of small lots may be difficult
- Needs organization to coordinate and implement system
- Requires expensive computer hardware
- Displaces some existing marketing institutions

Conditions Needed for Success

For successful implementation of an electronic marketing system, certain conditions such as competitive markets, commitment from both buyer and seller, acceptable commodity description and

a large volume are essential. The system must include enough buyers to assure competitive bidding. A lack of buyers might lead to a degree of monopsonistic power and all advantages of an electronic marketing system would be lost.

Seller attitude is critical. Livestockmen have proudly and admirably worn the banner of independence, but some have carried it to the point of not cooperating among themselves. An electronic computer market would continue to allow producers to market their livestock independently. For maximum impact, however, smaller producers could coordinate their marketings by pooling and sorting livestock into larger, more homogenous lots for which a better price could be received. This has worked effectively in marketing cotton through TELCOT. For the system to succeed, livestock producers must **want** to improve their market system and **take** positive action toward this objective.

A clear and understandable description of the commodity is essential for success of electronic marketing. Buyers and sellers must be confident that livestock description is accurate. To gain buyer confidence in description, third-party grading might be necessary, even though it could limit small producer access to the system. If grades or descriptions are devised so that sellers can list accurately their own livestock, much flexibility is added to the system.

Limited accessibility of low-volume sellers caused by third-party grading can be overcome by organizing livestock into pooling groups or associations. Of course, livestock pooling by several sellers will be necessary prior to listing on the computer system. The advantage of not moving livestock prior to sale will be lost and the period for delivery will be shorter.

Another requirement for success is to have large volumes traded across the computer network. Adequate volumes will enhance competition and price determination, as well as lower-unit marketing costs.

Ownership and Implementation

Ownership of a computer market might be private, a group of livestock producers, a group of existing livestock marketing firms or anyone with capital who is willing to invest in such a venture. The system could be completely owned and operated independently of existing livestock marketing firms and facilities. However, new facilities to headquarter each terminal and to weigh, pool and sort livestock would be expensive. Incorporating existing market firms and facilities would seem more practical.

Auction Markets

One concept that would complement the activities of firms currently engaged in livestock marketing would be for marketing groups and firms to lease the CRT terminals from the entity owning the computer marketing system. An existing auction market could continue to have its scheduled weekly sales and at the same time lease a CRT terminal and list livestock over the computer market. Or, the auction could list livestock only on the computer network. A portion of the fee charged for listing each head would be kept by the listing firm and a portion would go to the computer marketing system. Under such a setup, the auction could hire full-time personnel to list, pool and sort cattle. The auction could provide holding pens, loading chutes and regulated scales as they do now. The computer system would eliminate the necessity for large, auditorium-type, auction ring facilities and part-time labor for a once-a-week sale. The auction market firm could reduce cost, increase volume through aggressive listing and increase returns.

Buyer Firms and Agents

Buyer firms potentially could benefit from a livestock computer market, too. These firms could lease the buyer CRT terminals and monitor available supplies over the area covered by the computer system. This would expedite the location of livestock and get the livestock to the purchaser faster and in a healthier condition. The buyer firm could plan more efficiently the hauling routes and schedules for pickup and delivery of livestock. Also, the livestock listed on the "offer system" of the computer market would provide the buyers a backup to the daily supplies.

Conclusion

There are problems to overcome and conditions to be met before computer marketing can be implemented. The problems are not so great that they cannot be overcome. Computer marketing can be an alternative marketing system for the livestock industry. It deserves close evaluation in an active program to improve marketing efficiencies and prices of livestock.

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