



Current Report

Cooperative Extension Service • Division of Agriculture • Oklahoma State University

Electronic Marketing of Livestock and Meat

Clement E. Ward
Extension Economist-Marketing

Many groups, from producers to consumers, have been interested recently in the possibility of marketing livestock and meat using a conference telephone, video tape, teletype, or computer. These electronic marketing methods are not entirely new, but interest in them increased during the 1970's due in part to the U.S. Department of Agriculture's (USDA) support (over \$1.3 million) of electronic marketing projects for livestock and other agricultural commodities.

This OSU Current Report discusses electronic marketing, its evolution, some current and proposed systems, and expected benefits.

What is Electronic Marketing?

The phrase electronic marketing encompasses a variety of methods (for example, conference telephone, video tape, teletype, or computer) of buying and selling agricultural commodities. The term electronic simply means these systems utilize some type of electronic equipment to disseminate information and assist in arriving at a transaction (sales) price.

Trading is a more appropriate term than marketing. These are electronic marketing systems for sellers (usually producers) but are electronic procurement systems for buyers (usually marketing and processing firms). Thus they are actually electronic trading (buying and selling) systems, but electronic marketing is a commonly used phrase.

Several characteristics are common to most if not all electronic marketing systems. First, pricing is centralized. The process of one or more buyers and a seller arriving at a sales price occurs under established operating rules which are communicated to all potential buyers and sellers. Third, trading is based on the description of the commodity offered for sale, rather than on the basis of visual inspection by buyers. Thus in most cases, buyers do not physically see the commodity bought until after they

take delivery of the commodity. Fourth, buyers and sellers have remote access to the trading system. Remote access means buyers can participate in the trading process without being present at the point where centralized pricing occurs, and sellers can offer their commodities for sale without first bringing them to the central pricing point. Buyers and sellers both participate in the trading process via the electronic media (telephone lines, teletype transmitters and receivers, and computer terminals).

Evolution of Electronic Marketing

Electronic marketing systems were initially developed in Canada. In 1961, the Ontario Hog Producers Marketing Board began marketing slaughter hogs by teletype auction. Later, modified teletype auction systems began in Alberta, Manitoba, and the Maritimes provinces of Canada. Buyers and sellers in a teletype auction are connected by teletype receivers and transmitters. Hogs are sold by description using standardized grades and terminology. Hogs may be assembled at one or more central sites prior to the sale or are assembled after the sale. Canadian teletype systems use the Dutch auction (descending bid) method unlike auctions in the U.S. which use the English auction (ascending bid) method.^{1/} It is believed the Dutch auction system is faster and speeds trading on a teletype marketing system.

The first electronic marketing system in the U.S. was a telephone auction for slaughter hogs, begun in 1962 in Virginia. Marketing slaughter hogs by telephone auction (commonly referred to as a teleauction) proved unsuccessful, due to insufficient volume and inability to satisfactorily describe hogs. In 1965, however, MFA Livestock Association (a Missouri cooperative) began a successful program of marketing feeder pigs by telephone auction. Tele-auctions also have been successful in marketing slaughter lambs, the first beginning in Virginia in 1971.

In a teleauction, livestock are sold over a conference telephone call connecting several buyers with the sponsoring firm representing the sellers (producers). Conference calls

^{1/} Ascending bids are: \$60.50, \$60.75, \$61.00, ...; and descending bids are \$61.00, \$60.75, \$60.50,

connect several persons who can be at separate locations. Additional bidders can be included by using microphone-speaker sets at each buyer site. Livestock are described over the conference phone call and auctioned to the highest bidder. In some cases, livestock remain on the farm until after the sale (for example, feeder pigs). When livestock remain on the farm, buyers choose the delivery date within a specified period of time after the sale day (usually within 1-2 weeks). Teleauctions have less trading capacity because trading is slower and fewer buyers and sellers can economically participate. Thus, teleauctions tend to serve relatively small local areas (for example, up to a few counties) or are applicable when trading occurs relatively infrequently (for example, once each week or two).

Electronic marketing systems with the greatest capabilities utilize high-speed electronic computers. Computerized systems can store and process large amounts of information rapidly and accurately. They expand the potential marketing area and expand the potential functions and services compared with other electronic marketing systems.

The first computerized marketing system was developed by Plains Cotton Cooperative Association (PCCA) in Lubbock, Texas. PCCA began marketing cotton by their computerized TELCOT system in 1975. Buyers and sellers interact in the TELCOT system using television-like cathode-ray computer terminals (called CRT's - cathode-ray tubes). CRT's enable sellers (producers) to offer their cotton for sale, select cotton of the type they demand, and to buy the cotton. Buyers and sellers perform their respective functions on the CRT in a manner similar to typing on a typewriter.

Producers offer their cotton for sale by contacting a local gin which has a CRT via a WATS (Wide Area Telephone Service) telephone call. The CRT operator enters the offer into the TELCOT system. A producer may offer his cotton for sale, allow buyers to bid on it for a specified period of time (for example, 15 minutes), and sell it to the highest bidder. Alternatively, a producer can offer his cotton for sale at a specified price and the computer maintains the offer until a buyer matches the offer price or until the offer price is changed.

Many believe an obstacle to marketing livestock through some types of electronic marketing systems is the difficulty in describing livestock in terms that are meaningful to all buyers. Video auctions were developed to offset the description problem. The first video auction for feeder cattle was held in 1975 in Oregon. Video cameras take moving pictures of feeder cattle on the farm or ranch prior to the sale and cattle remain there until after the sale. Buyers assemble at a central place and the video tape of each sale lot is shown. After showing a video tape of a sale lot, an auctioneer auctions the feeder cattle to the highest bidder. Delivery is arranged between the buyer and seller after the sale, usually within 1-2 weeks of the

sale. The video auction, unlike other electronic marketing systems, enables buyers to visually evaluate the livestock offered for sale and does not rely entirely on description selling.

Electronic Livestock Marketing Today

Since the first electronic marketing systems of the early 1960's several others have begun and continued to operate. The following mentions some of them.

Teleauctions are the least complicated electronic marketing system, but effectiveness is not measured by complexity. Six producer-organized groups (five are cooperatives) in five states (Illinois, Missouri, North Carolina, Ohio, and Wisconsin) market feeder pigs by teleauction. MFA Livestock Association, the cooperative first marketing feeder pigs by teleauction conducts 3 teleauctions each week and regularly has buyers from as far away as North Carolina. In fiscal year 1979-80, MFA marketed over 650,000 feeder pigs for over 2400 producers.

Four cooperatives in Idaho, Oklahoma, Virginia and Wisconsin market slaughter sheep and lambs by teleauction.^{2/} In 1979, producers marketed 72,500 sheep and lambs by teleauction.

Interest in video auctions seems to be increasing for feeder cattle because cattle remain on the farm until sold, yet several buyers can see the cattle (the video tape) and bid on them. A marketing firm sponsors an annual video auction in Montana. A livestock commission firm in Oklahoma City began a video auction in Oklahoma in 1980. It has sponsored 3 video auctions to date and sold more than 7,500 cattle for Oklahoma and Texas producers. Marketing firms or groups of producers in other states are exploring the possibility of video feeder cattle auctions in their states.

Three Canadian provinces (Alberta, Ontario and the Maritimes) continue to market slaughter hogs by teletype auction. Virtually 100 percent of all slaughter hogs in each province are marketed through the teletype system and together they accounted for about 40 percent of all slaughter hogs marketed in Canada in 1979.

Currently, there are no computerized marketing systems operating for livestock or meat, but several systems are being developed and are about to be tested.

Proposed Systems

Some of the proposed systems are being supported financially by USDA through the Federal-State Marketing Improvement Program. States receiving aid by Livestock class are: feeder cattle (Texas and Tennessee), slaughter cows (Virginia), eggs (Georgia), and a multi-commodity system (Georgia) including peanuts, soybeans, corn, fruits, vegetables, and livestock.

^{2/}OSU Extension Facts discusses the Oklahoma lamb teleauction.

USDA is encouraging but not financially supporting expansion of TELCOT and development of a system for wholesale meat.

Three proposed systems are discussed briefly here. All three are planned to begin operating in 1980. If successful, all have potential applications in Oklahoma, perhaps with some modifications.

but does not assign the sale lot to the highest bidder as CATTLEX does. It is more of a computer information service. CATS lists sale offers and bids for meat by description. Bids and offers may be for three time periods -- spot sales (trades for delivery within 5 days), short term future sales (6-10 days), and longer term future sales (more than 10 days).

CATS allows trades to be made in 10 regions or trading zones in the U.S. Sale offers consist of the geographic region to which meat will be sold, time frame of the sale, meat item offered, quantity offered, preferred shipping date, offer price, and seller. Similar information regarding bids is recorded also. Actual sales are made by buyer and seller personnel in each respective company.

Sellers are identified so that long-standing customer-supplier relationships can be maintained. Buyers remain anonymous except to the selling firm.

Sales price and related data will be compiled and made available as public market information on a regular basis. Selected information (for example, price, quantity, and buyer) will be made available to participating firms for managerial decisionmaking.

Slaughter Hogs --

A computerized slaughter hog marketing system is being developed in Ohio. HAMS (Hogs Accelerated Marketing System) bears similarities to the two previously discussed computerized systems but has some unique features.

Buyers and sellers interact via 47 computer terminals. Seventeen terminals are at stockyards in Ohio, 10 on farms, and 20 at meatpacking plants in 7 states. Producers can offer hogs for sale by phoning information to the computer. Slaughter hogs will be sold on a description basis. A key feature of this system is the accuracy of the grade-value

Feeder Cattle --

A computerized exchange system for feeder cattle (called CATTLEX, or Cattle Exchange) is being developed at Texas A & M. Plans are to pilot test CATTLEX in the summer of 1980 and have it fully operational by the fall of 1980.

CATTLEX will auction cattle in sale lots of about 20 or more head. Sale lots are of two types, ranch cattle or delivered cattle. Ranch cattle are described by a certified third party grader and offered for sale in truckload size lots or larger. Cattle remain on the farm or ranch until after the sale and buyers take delivery within 14 days after the sale.

Delivered cattle are less than truckload size sale lots (10,000 to 40,000 pounds). These cattle are delivered to a live-stock auction market, weighed and described by a third party grader, sold over the CATTLEX system, and delivered the day of sale.

Each buyer and seller site has a CRT and a printer. Cattle owners complete a Certificate of Agreement for Sale of Cattle which includes the owner's name, cattle location, delivery point, weighing condition, and no-sale or reservation price. The third party grader describes the cattle (age, sex, weight, breed, grade, flesh condition, ear tag or brand, and other information the seller believes will aid in merchandising the cattle). Sellers phone or visit a designated sale site to offer cattle for sale through CATTLEX.

Buyers submit a letter of credit to received authorization to buy cattle through CATTLEX. The computer monitors each buyer's daily purchases and invalidates a buyer's authorization number when purchases exceed the credit limit. Buyers are required to make a partial payment on cattle purchased

(\$30 per head for cattle averaging 500 pounds or less and \$40 per head for cattle averaging over 500 pounds. Final payment is made within 24 hours after delivery. A Texas cooperative, the Texas Livestock Marketing Association, will handle the flow of funds between buyers and sellers.

Buyers have several aids in purchasing cattle. The computer can sort sale lots by sex, weight, grade and age. For example, a buyer wanting only Medium-1 steers weighing 500-700 pounds can find those fitting that description and bid on them. Thus, buyers can select cattle that best fit their needs.

Cattle are sold through CATTLEX in random sale order. Buyers and sellers can monitor the bidding during the 16-minute sale period for each lot sold. Eight lots can be bid on during any 16-minute period. The most recent 8 lots sold are displayed on the CRT for up-to-minute buyer and seller market information. After a sale, the buyer, seller, and CRT operator each receive a Confirmation of Sale. This verifies the sale terms and price. Additional market information is compiled also for release to the public (for example, through USDA's Market News Service).

Wholesale Meat --

A private meat price reporting firm (the American Meat Exchange) and a computer sales company (General Electric) have developed a computerized exchange system for wholesale meat, called CATS (Computer Assisted Trading System). The sponsoring firm plans to initiate CATS in 1980.

CATS differs from CATTLEX in some distinct ways. The primary difference is that CATS assists the exchange process relationship. USDA slaughter hogs grades have been modified (based on research) to reflect the market value of lean cuts from the hog carcass. A third party grader will

grade the hogs. Other descriptive information is available (for example, number of head, weight, and location of hogs).

Producers can sell hogs by offering hogs for sale at a specified price. They also have other selling options. A descending bid auction will operate 2 hours each trading day (5 days per week) and an ascending bid auction will operate 2 hours each trading day. Hogs in sale lots of 50 head or more can remain on the farm until after the sale. Sale lots of 100 head or more can be shipped directly to the buyer whereas lots of 50-99 head will be delivered to an assembly point. Lots of less than 50 head will be sold after being delivered to an assembly site, commingled into larger sale lots after being weighed and graded and will be delivered to the buyer immediately after the sale.

Expected Benefits

What will electronic marketing of livestock and meat accomplish that more traditional marketing methods are not accomplishing? There is disagreement regarding the answer to this question among producers, industry firms, economists, and USDA administrators.

While it cannot be proven or disproven yet, the author believes the expected gains depend on the electronic marketing system in operation and the situation existing before the system was implemented. Some of the factors contributing to the existing situation are whether livestock are sold in large or small lots, direct to buyers or through an assembly site, and the number, location and size of potential buyers, among others. For example, benefits to buyers and sellers will differ if buyers can buy livestock in truckload lots through an

electronic marketing system when they previously could buy only in smaller sale lots; compared to the situation when livestock were marketed in truckload lots before and after the electronic marketing system was started.

The following are some potential benefits of electronic marketing. Some may not be realized for specific electronic marketing systems and under given market situations. Potential cost savings include: (1) lower transportation costs from shipping livestock directly to buyers in truckload lots, with less handling, bruising, shrink, and stress; (2) lower marketing fees, even with more expensive equipment because of the large volume marketed; (3) more efficient use of facilities and equipment due to flexibility in delivering livestock; (4) improved methods of collecting and distributing market price information; and (5) reduced traveling for buyers and sellers.

Potentially higher returns to producers result from: (1) increased competition because buyers are attracted to large volume sales where livestock are sold in truckload lots; (2) improved market information; and (3) improved pricing accuracy, resulting from improved exchange of information concerning product characteristics contributing to product value. Producers also benefit from having access to a market and being able to know the sale price before livestock leave the farm.

Producers probably are the greatest potential beneficiaries of electronic marketing through innovative marketing firms and processors can benefit also. Several intermediary marketing firms and some jobs on the buying and selling side may be eliminated. In a longer run time frame, consumers should benefit from lower marketing system costs and improved products meeting their demands. Consumer price reductions are not expected, only less rapidly increasing retail prices.