

Basic Livestock Futures, Part 1: Livestock Futures Markets



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This Fact Sheet is part one of a three-part series that discusses the fundamentals of livestock futures markets, the mechanics of futures trading, and the principles of hedging livestock. Part one focuses on the history and general function of livestock futures markets. This Fact Sheet addresses such questions as: what are futures markets and futures contracts, how do the exchanges and clearing houses work, and who trades futures contracts?

"Basic Livestock Futures, Part Two" (OSU Extension Facts 431) discusses the mechanics of trading futures. "Basic Livestock Futures, Part Three" (OSU Extension Facts 432) discusses the principles of hedging livestock.

Livestock Futures Markets History

Futures markets for livestock began in the mid-1960s with the establishment of futures trading in slaughter cattle and live hogs by the Chicago Mercantile Exchange. After rather modest beginnings in the late 60s, livestock futures trading "boomed" during the early 70s. The highly variable livestock prices of the 70s greatly increased the trading interest of livestock producers and professional speculators alike. Livestock producers looked to the futures market as a means of protecting their operations from the ever increasing risks of loss due to adverse price changes. Speculators, on the other hand, viewed highly volatile prices as exceptional opportunities to make profits from wise futures trades. Risks associated with the livestock business in general were greatly increased by increased price variability. Livestock futures markets were a means by which the speculators could assume risks that producers were trying to avoid.

In late 1971, futures trading was established for feeder cattle on the Chicago Mercantile Exchange. Feeder cattle contracts took some time to gain the volume of trading necessary to insure a competitive

market. Feeder cattle futures have proven to be a viable market, one that is very important to Oklahoma's livestock industry. In 1986, feeder cattle futures became the first livestock futures market to utilize cash settlement rather than physical delivery of the commodity to close out contracts at expiration.

New futures contracts are introduced and existing contracts are modified as industries and markets evolve. In 1990, the Chicago Mercantile Exchange introduced a broiler contract. It is too early to determine whether or not this futures contract will develop into a viable market.

In 1993, responding to concerns that the cash settlement of feeder cattle contracts was problematic and was causing the contracts to lose trading volume, the Chicago Mercantile Exchange introduced a new cash settlement index against which the feeder cattle contracts would be cash settled.

A Futures Market

Futures markets are markets in which prices are established for commodities committed for delivery at some time in the future. For example, a price may be established in the futures market in February for slaughter cattle that will not be available for slaughter until the following June. Prices may be established and delivery commitments made long before physical deliveries of the livestock are to take place. So exchange of ownership in the futures market is accomplished by a "paper" or "physical" exchange of livestock that typically accompanies a current or "cash" market transaction.

A Futures Contract

Commitments for delivery are made in the futures markets through use of futures contracts. A futures contract is a legally binding agreement. A trader who sells a futures contract makes a legal commitment to deliver the commodity represented by that contract. A

trader who buys a futures contract makes a legal commitment to accept delivery of the futures commodity.

Futures contracts represent specific delivery commitments. The essential specifications for a futures contract are quantity and quality of the commodity, location of delivery, time of delivery, and delivery procedures. Traders must know specifically "what" is to be delivered, "where" it is to be delivered, "when" it is to be delivered and "how" delivery is to be accomplished before they can accurately determine a price at which they are willing to buy or sell these commitments.

Feeder cattle futures contracts specify the quantities and qualities of feeder cattle and the cash settlement terms of the transaction. Feeder futures contracts are cash settled against a composite cash feeder cattle price index. OSU Extension Facts 509 discusses cash settlement in more detail.

All futures commitments for a given commodity are identical except for time of delivery. Thus all commitments for a given delivery time are identical. Uniform contracts encourage a large volume of trading needed to insure highly competitive markets. For example, during September 1991, over 7,500 contracts per day were traded at the Chicago Mercantile Exchange (CME) for 40,000 lb delivery units of Choice grade slaughter steers to be delivered during October of 1991. The prices at which the roughly 7,500 commitments per day were made ranged from highs of \$75.00/cwt late in the month to levels below \$70.00 during the first week in September. There is no better practical way of fair and equitable pricing than to have a large number of buyers and sellers in the market.

Since all futures contracts are uniform, hedgers must make adjustments in the quoted futures prices. Adjustments must reflect the quality of livestock they expect to produce and deliver to their local market at the time their livestock will be ready for sale by the marketing methods they ordinarily use. This procedure is called a "basis" adjustment which is explained briefly in this Fact Sheet and in detail in OSU Extension Facts 433.

Current Report 522 details the more important specification of major livestock futures contracts.

Futures Exchanges and Clearing Houses

Futures contracts are traded at central locations which are called futures exchanges. For example, the Chicago Mercantile Exchange is by far the largest market for livestock futures. The exchanges do not buy or sell futures contracts; however, their activities are critical to a futures market.

First, the exchanges provide the physical facilities or building where futures trading and the associated activities take place. The actual buying and selling of futures contracts take place in the "trading pits" of the

futures exchanges. These trading pits are stairstep-like structures which rise around a center "pit." With limited space possible for face-to-face trading, it is necessary that actual trading be limited to traders who own memberships on the exchanges. However, most exchange members are brokers who trade futures contracts for other people. So, anyone may trade futures contracts although they must trade through a broker at the exchange.

The commodity exchange, in conjunction with the Commodity Futures Trading Commission, establishes trading rules and regulates trading of contracts. Rules and regulations are designed to maintain highly competitive markets and to promote fair, equitable and orderly trading for all who use the markets. The Commodity Futures Trading Commission is an independent government agency which oversees all futures trading with the specific charge of protecting the public interest in all futures markets. The trading rules include such things as the 300 contract speculative position limit for any single delivery month in the live cattle futures market. The \$1.50/cwt limit to price changes from the previous day's closing price is an example of a rule which facilitates orderly trading. The exchanges also control contract specifications, designate delivery months, monitor contract deliveries and, in general, tend to the details which allow the markets to work.

Futures exchanges employ a clearinghouse concept in handling the transactions of their members. The clearinghouse, which is maintained by the exchange, verifies and records all futures transactions. The clearinghouse also assumes legal responsibility on both sides of all futures transactions. In other words, the clearinghouse guarantees fulfillment of all obligations made by exchange members. Futures traders have the full financial assurance of the Chicago Mercantile Exchange to back any obligation due them in the futures market.

An additional function of a futures exchange is to collect and distribute complete and accurate market information concerning all futures market transactions. Price information is made available continuously during all futures trading days. Brokers located all over the world have direct lines of communication to the exchanges and often know the prices at which transactions were made within seconds of the time of the trade. Price and market information is released through the various wire services at set time intervals during the day. Daily summaries of prices, volume of trading, trading positions, deliveries, and other market information are widely published and reported by the various news media.

Futures Prices

Futures contract prices are determined by public auction in the pits of the commodity exchange. Traders

Thursday, February 11, 1993
Cattle-Live (CME) = 40,000 Lb, Cents Per Lb

	Seasons					Lifetime	
	Open	High	Low	Close	Change	High	Low
Feb 93	82.00	82.10	81.52	82.07	+.27	82.10	68.10
Apr	79.65	79.72	79.15	79.47	-.07	79.72	68.25
June	73.90	73.95	73.40	73.57	-.07	74.60	66.80
Aug	71.87	71.90	71.57	71.70	-.07	72.65	66.10
Oct	73.20	73.20	72.82	73.00	-.07	73.30	67.55
Dec	73.50	73.50	73.25	73.30	-.20	73.85	68.10
Feb 94	72.80	72.80	72.40	72.40	-.32	73.50	70.90

Est vol: 12.596, vol Wed.: 10.888; open int 24.908, +117

act as their own auctioneers supplementing verbal outcries with hand signals. Although trading may appear to be chaotic to the outsider, each trader is able to accurately communicate necessary conditions concerning an offer to sell or bid to buy to others in the pit. The prices at which transactions take place reflect the supply of and demand for the contracts which represent commitments of delivery of the specified commodity at some time in the future. For each sale there must be a buyer, and for each purchase there must be a seller. Sellers ask as high a price as they think they can get, and buyers offer no more than they think they will have to pay. Thus brokers representing buyers and sellers from throughout the U.S. and the world bring together those forces of supply and demand at one place and time. The result is reflected in futures market prices.

Daily futures price summaries are typically reported in the form shown in the table above.

The first column of abbreviated months represents the various delivery months for which live cattle contracts were traded on February 11, 1993. Thus the different prices in different rows represent price differences associated with different delivery dates. The next column designated as "open" represents prices at which contracts for the various delivery months were trading when the market first opened for trading on the morning of February 11. The column of "high" prices represents the highest prices at which transactions were made for the various contracts during the trading day. The column of "low" prices represents the lowest prices at which transactions were made for the various contracts during the trading day. The next column, "close," represents prices at which transactions were being made when the market closed in the afternoon.¹

The "change" column refers to the change in "closing" prices comparing today's closing price to the closing or settlement price for the previous day. Some price quotations give the previous day's closing or settlement price rather than the change. Both methods yield the same information. The last two columns represent the highest and lowest prices that have been recorded for the various contracts since they have been traded. Contracts are generally traded for a year or more prior to delivery. Thus on February 11, 1993, the February 1993 contract had been traded for about a year with the prices recorded during that time as high as \$82.10 and as low as \$68.10. The February 1994 contract, on the other hand, had been traded for only about two weeks in the range of \$73.50 to \$70.90.

The estimated sales volume at the bottom of the report refers to contracts traded for all delivery months. Thus on February 11, 1993, there were about 12,596 contracts of cattle at 40,000 lb each for which commitments were made in the futures markets. The open interest number represents the number of commitments for delivery that existed on that date for all contracts. These commitments may be offset before the contract maturity dates or may result in deliveries.

Futures Market Traders

There are two basic types of traders in the futures markets: speculators and hedgers. Speculators are those traders who buy and sell futures contracts for the purpose of profiting from differences between buying and selling price. They will buy contracts if they think they will be able to sell them later at higher prices and sell contracts when they expect to be able to buy later at a lower price. They profit only to the extent they are able to anticipate future price changes.

There are many types of speculators. There are short term speculators who might buy and sell the same contracts one or more times in the same day attempting to profit from price changes within the daily trading ranges. Others study price trends over longer periods of time using various charting techniques and technical

¹ Sometimes price quotations will include "settle" instead of "close." If trade is very active at the closing bell, traders sometimes need a few more seconds to finalize last transactions. The "settle" price is this finalized price rather than the price at the closing bell. On most days, the closing price is the settle or settlement price.

market factors in trying to anticipate a future rise or decline in prices. They buy and sell as they interpret the trends in the markets and may hold a commitment for a day, a week, a month, or longer. Speculators using fundamental supply and demand analysis will take a futures position when feeling that futures prices are higher or lower than they will be when the futures reach maturity and thus come into line with cash markets. They hold their position until futures prices come into line with their expectations or their expectations change. Most speculators probably use some combination of technical and fundamental analysis in developing and implementing their trading strategies.

Hedgers are traders who use the livestock futures markets to offset price risk on their livestock. They would not knowingly take a position in the futures market that would lose them money, but futures profits or losses need not be their primary concern. Hedgers take futures market positions so that futures profits or losses will offset profits or losses on their livestock. A cattle producer, for example, would sell a futures contract to offset the price risk of cattle on feed. If cattle prices fall, then futures prices would fall also, giving a profit in the futures market to offset the lower price for the cattle. The forward pricing hedger makes profits from producing livestock and simply uses the futures market to price them. The price risk that is reduced by hedging may be of greater importance than any realistic potential profit in the futures market.

The principal justification for establishment of futures markets is for hedging purposes. However, speculators account for a large proportion of the volume of trading for most futures markets. Some have questioned whether such speculative activity is good for a market, but in most cases speculative activity is necessary to make a market which the hedger can use effectively. First, a large volume of trading, which the speculators provide, is necessary if hedgers are to be able to buy and sell contracts when needed to conduct their hedging operation. Secondly, it is generally the speculators who are willing to take the price risk that the hedgers are trying to avoid. There are some cases where too much speculative activity has made hedging difficult. In general, however, a large volume of speculation makes a good hedging market, and it is highly unlikely that any of the currently active futures markets could long exist without speculative activity.

Futures Markets as a Source of Price Outlook Information

Futures market prices are determined by the supply of and demand for the delivery commitments represented by the futures contracts. Many speculators and hedgers use fundamental supply and demand analysis to some extent as a basis for their decisions. Thus futures prices are a reflection of current supply and demand for future delivery of the traded commodity. However, many have interpreted futures prices as "accurate" cash market outlook prices. For example, many feeder cattle have been purchased at prices based on favorable futures prices for slaughter cattle. These futures prices have later proven to be poor price predictors; actual cattle prices have been lower than indicated earlier by futures prices, and large feeding losses have resulted.

Futures trades are not always based on fundamental cash market expectations. As mentioned previously, many speculators trade futures on the basis of current short-term trends. Thus, they are concerned about the price of contracts tomorrow or a week from now rather than price at time of delivery. Also, there are many hedgers who give little weight to price outlook in their hedging decisions. They are more concerned with reduced price risk than with maximum price level. Transactions based on these motives need not reflect future price outlook for the traded commodity even though prices in these cases reflect the current value of the delivery commitment. This type of trading may limit the accuracy of futures as a source of outlook information.

Most objective studies indicate that futures prices are a valuable source of outlook information, but they are far from perfect. Futures probably are about as accurate as most other outlook sources. The primary advantages of futures prices as a source of outlook are that they are readily available through most news media, and they quickly reflect changing market conditions. However, they often overreact, limiting their accuracy as price predictors.

The most important point for the hedger to remember about futures prices is that the futures market is offering a price for livestock, but the only way assured of getting that price is to hedge. A hedger cannot depend on getting a price reflected in the futures market unless he places the hedge at the current price and successfully carries the hedge through to completion.

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