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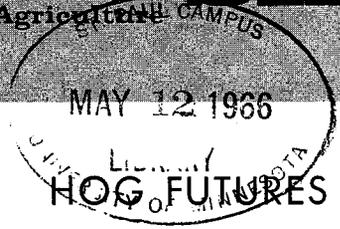


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FACT SHEET

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Futures trading of live hogs began February 28, 1966, on the Chicago Mercantile Exchange. This development requires farmers and businessmen to refresh their understanding of what futures marketing involves and how it applies to the marketing of hogs. This fact sheet provides some background information.

Hog production and feeding are important farm enterprises in Minnesota. Feeder pigs for the feeding operations are either produced by the hog feeder in his own sow herd or purchased from a specialized feeder pig producer. Regardless of whether the feeder raises his own pigs or buys, he must make a decision regarding the feeding enterprise.

He likely has some feed, labor, skills and equipment he can utilize in a hog feeding operation. Consequently, he may be interested in buying feeder pigs. His decision might follow this example: He has the opportunity to buy 91 feeder pigs weighing 50 pounds and priced at \$18 per head or 36 cents per pound. From his records he estimates that feed, labor, equipment, capital, and miscellaneous costs required to finish these pigs to a slaughter weight of 220 pounds are about \$22 per head. (He also calculates his marketing costs, which vary depending on distance from market.) His cost calculations look like those in box A of diagram 1.

Diagram 1. Hog Feeder Cash Transactions

A.		APRIL
<u>Buys feeder pigs</u>		
91 head x 50 lb. each x 36¢ =		\$1,638.00
<u>Estimates feedlot costs</u>		
91 head x 22 =		2,002.00
Total production costs		\$3,640.00
<u>Estimates needed slaughter price</u>		
(1) 91 head x 220 lb. =	20,020 lb.	
(2) \$3,640 (total cost) ÷ 20,020 lb. =	18¢ per lb.	
B.		
Sells 100 U. S. No. 1,2, hogs (220 lb.) at ??		
If price is more than 18¢ = profit		
If price is equal to 18¢ = covers all costs		
If price is less than 18¢ = loss		

The hog feeder then calculates the price he would have to receive in August to cover the \$3,640 total production costs. If he feeds the pigs to a slaughter weight of 220 pounds he will cover all production costs if his finished hogs sell 4 months after purchase (August) for 18 cents per pound.

The hog feeder next makes a purchase decision. Knowing his costs and the current value of feeder pigs, he reviews outlook information to estimate the slaughter prices he can expect in August. If price prospects are 18 cents per pound or higher, he will probably decide to finish his own feeder pigs or buy some feeder pigs. If his estimated price becomes a reality he can recover the purchase cost of feeders and the \$2,002.00 feedlot costs, or make an extra profit. If he estimates the sale price to be lower than the needed 18 cents in August he will probably not buy feeder pigs, or he may sell those he has in April. If he was too optimistic in the first example, he will suffer a loss (see box B of diagram 1).

Several times in the past few years prices of hogs have been below farmers' expectations. Unable to forecast the direction and magnitudes of price change, many hog feeders have incurred losses despite their technical and managerial efficiencies. Risk of loss due to unexpected price change is common to many aspects of agricultural production and marketing. For some commodities it is possible to shift most of this price risk to people not directly involved in handling the product: This is done through futures market transactions.

THE FUTURES MARKET

The futures market does not deal with physical commodities. Instead it deals with promises to deliver or to receive a commodity at some future time. These promises are made in the form of a legal "contract." Futures contracts are bought and sold on an organized market under prescribed rules and regulations. The futures contract always specifies the quantity and quality of the product to be delivered and the place and time at which it will be delivered.

The people who deal on the futures market are "speculators" and "hedgers." Speculators are those interested in dealing with the futures contract itself for the purposes of making a financial gain as the prices of futures rise and fall. They want to accept the risk of price change. Hedgers, by contrast, are people who are interested in dealing with the futures contract for the purpose of avoiding risk of loss by price change.

Hedgers are generally people who have possession of a commodity and wish to (1) store it, (2) transport it, or (3) perform additional services upon it before selling. For example, a local grain elevator will generally perform the function of storage before sale. In practice the operator attempts to shift price risk from the elevator to the speculators in the grain market by means of the hedging process. Thus, he eliminates the risk of losing his storage margin regardless of price change over time. A pig feeder is also a potential hedger since he can use hedging to cover the loss due to price change from the time he buys feeder pigs to final selling.

WHAT IS HEDGING?

Hedging is a process of making two offsetting transactions, a sale in one market and a purchase in another. Purchase of a commodity in the cash market is countered by a simultaneous sale of that commodity in the futures market. Or a sale of a commodity in the cash market is countered by a purchase of that commodity in the futures market. This operation has been quite common in such commodities as food and feed grains, eggs, oils, cotton, wool, lard, pork bellies, live cattle, and carcass beef.

In a case involving a country grain elevator, the elevator operator will purchase grain and store it until some future time, wishing to make profitable use of his storage facilities. The elevator operator is uncertain of what the price of this grain will be in the future. To avoid possible loss by price change during the storage period, elevator operators will "sell" (contract to deliver his stored grain in some future month) a futures contract on that grain in the futures market at the same time.

Futures prices normally exceed cash prices by the storage, transport, or processing costs between the day of cash purchase and the future delivery month. If the elevator operator "sells" a futures on his grain, the futures price he will receive (assuming abundant supplies) includes the present cash price plus the storage cost that would be added before the future delivery month. He then may do two things: (1) he can allow the futures contract to mature and deliver on it, or (2) he can "buy" back an offsetting futures contract before maturity and sell on the cash market.

Futures prices and cash prices will be close to the same amount in the delivery month. The price levels are not important to the elevator operator so long as they differ only by storage or transport costs at the time of hedging. No matter what happens to the price of cash grain as delivery month approaches, the elevator operator has made his storage cost differential and has also protected himself from risk of loss by price change due to his hedging. At the same time, however, he also has "ruled out" any price gains that he would have made if he had not hedged.

This hedging process may take on different forms, may be valuable to different people for different reasons, and may cover only a few days or several months in duration.

APPLICATION TO HOG MARKETING

A specific contract is traded in the hog futures market. The announced trading unit is 20,000 pounds of hogs, live-weight basis (equivalent to 91 hogs weighing 220 pounds). The standard contract specified delivery of USDA Grade No. 1 and No. 2 hogs (barrows and gilts) averaging 200 to 230 pounds. Substitution possibilities are outlined in the contract details.

Initial contract months are July, August, September, October, November, and December. Par delivery is at approved livestock yards in Chicago. Deliveries to approved stockyards in Omaha, East St. Louis, Sioux City and St. Paul may be made at a discount of \$1 a hundred-weight below the Chicago price.

As is the case with all futures contracts, a margin is required by the brokerage firm handling the transaction. The initial minimum margin requirement is \$500.00 per contract. However, this may vary from one locality to another. This deposit is used by the brokerage firm to maintain margin requirements specified by the Futures Exchange. The maintenance margin required by the exchange may be figured at about \$300. This means that if the market position of the hedger becomes less favorable (future price increases) the remaining \$200 is used by the broker to rebuild margin requirements with the exchange clearinghouse. If the market continues to move against the hedger he may be required to furnish more funds.

Hedging the hog feeding operation includes additional costs that must be considered:

1. Brokerage fee--or the cost of professional selling and buying services. This fee would involve about \$30 for the entire hedging or speculating operation.
2. Transportation and yardage--If livestock are delivered, these costs have to be covered by the feeder.
3. Interest on margin deposits--Interest on margins should be charged as a cost along with all others.

HOW A HOG FEEDER COULD HEDGE

Hog feeders are essentially processing a product. They hold an inventory of hogs for future sale. Thus, they are potential hedgers in the hog futures market. A hog feeder can sell a contract for future delivery of live hogs--either at the time feeder pigs are purchased and

ready to put into the feedlot or at some later date. A market speculator would buy this contract, agreeing to take delivery of the hogs (if the seller chose to deliver) during the delivery month.

To illustrate, let's continue with the first example where a hog feeder buys 91 feeder pigs. Recall that he would need 18 cents per pound to cover the feeder pig purchase plus all feedlot costs. Now let's see what he could do by using the futures market to hedge his position.

If in April the August hog futures are selling at 18 cents per pound (see box C in diagram 2) he could assure himself of favorable returns on capital and labor if he decided to hedge. By selling an August futures contract he assures himself of a price of 18 cents next August. He also obligates himself to either (1) deliver the number, weight, and quality of hogs specified in the contract (with allowable substitutions) at 18 cents before the contract expires or, as is true in nearly 99 percent of grain hedges, (2) to buy an offsetting contract of the same futures month just before maturity and at the then current market price (see box D in diagram 2 below).

Diagram 2. Hog feeder cash and futures transactions

	Cash transaction	Futures transaction
APRIL	A Buys 91 feeder pigs (50 lb.) at 36¢.	C Sells August futures contract. One unit at 18¢.
AUGUST	B Sells 91 U.S. No. 1 & 2 hogs at: 17¢ 18¢ 19¢	D Buys April futures contract. One unit at: 17¢ 18¢ 19¢

Normally, the respective cash market price and the futures market price in the delivery month will be very close together (compare boxes D and B, diagram 2).

For example, consider three different price situations in August: (1) where price expectations were realized (August cash price was 18 cents), (2) where prices were lower than expected (August cash price was 17 cents), and (3) where prices were higher than expected (August cash price was 19 cents). Assume in each case the hog feeder has hedged by transacting in the futures market. What would be the outcome?

1. If U.S. No. 1 and 2 hog prices in August are at 18 cents the feeder would be in the same position as he would have been without hedging.

2. Where hog prices are 17 cents per pound in August he would have lost \$2.20 per head in his feeding operation if he had not hedged. By hedging, however, he would cover his feeding costs by selling an August futures in April (at 18 cents). The cash and futures transaction in August would offset one another.

3. If hog prices in August are 19 cents per pound he would have gained \$2.20 per head had he not hedged. By hedging, he again assured himself of 18 cents in August and the August cash and futures transactions would cancel out any gains in that month.

CONCLUSION

Futures trading of hogs will not solve all of the U.S. hog feeder's income problems. But the potential for hedging the risk of price change should bring him some price stability and reduction of uncertainty.

The question of whether futures trading will work for live hogs, still remains. Success in cattle futures indicates that hog futures will also succeed. But a proper evaluation of the hog futures market can come only after several months of market activity have been observed.

For further information regarding hog futures trading, contact either the Chicago Mercantile Exchange or local brokers dealing in the commodity market.