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# RECENT CHANGES IN LIVESTOCK BASIS

**Recent trends in the basis** for Illinois direct and Peoria terminal market hog and cattle prices are reviewed here. Illinois direct marketings account for most of the cattle and hogs marketed in the state. The Peoria terminal market remains a major market, however, for both types of animals. The basis for barrows and gilts and for choice steers in these two markets has varied over the last five years. These variations may be indicative of changes in the basis for all Illinois cash prices.

The basis is calculated as the difference between the cash price and the nearby futures price. Because futures contracts are only traded for delivery in particular months, the "nearby" contract will be closer for some months than it is for others. For example, the November basis is the difference between November cash prices and the December contract. The difference between December cash prices and the December contract (until that contract expires) is the December basis. In general, the basis is stronger and less variable for delivery months. The basis approaches zero in the last few days of trading the contract.

**Hogs.** The basis for hogs is calculated using the price of barrows and gilts weighing from 210 to 240 pounds, U.S. grades 1, 2, and 3. From 1983 through 1987, cash prices were on average lower than futures prices by $0.33 per hundredweight in Peoria and by $1.02 in Illinois direct marketings. Futures prices follow cash prices very closely because 90 percent of the variation in futures prices is explained by variation in cash prices.

The basis in both markets varies significantly across months. Cash prices tend to be above futures prices in the months of August and September, but below futures prices in May and November. The difference between Illinois direct prices and futures prices averaged $2.78 in September and -$3.55 in May. In Peoria, the seasonal spread went from a high of $3.10 in September to a low of -$2.76 in May.

Basis patterns for hog prices have varied in the last few years. The basis was larger and showed greater seasonal fluctuations in 1983, 1984, and 1985, when hog prices were relatively weak. It became smaller in absolute value in 1986 and was often positive in 1987, as hog prices strengthened. The annual average Illinois direct basis for hogs narrowed from -$3.55 in 1983 to -$1.83 in 1985, and became a positive $0.65 in 1987. The Peoria basis followed a similar pattern, narrowing from -$2.40 in 1983 to $0.85 in 1987.

**Cattle.** The basis for cattle is calculated from prices of choice 1,100- to 1,300- pound slaughter steers. Cash prices were lower than futures prices by an average of $1.00 per hundredweight in Peoria and by $0.46 in Illinois direct marketings. Variation in cash prices explained almost 90 percent of variation in nearby futures prices.

Seasonality was much less in the cattle basis than in the hog basis. Cash prices tended to be slightly above futures in July and somewhat below futures in March. The basis for Illinois direct cattle sales averaged $1.27 in July and -$2.26 in March. In Peoria, the seasonal spread went from $0.98 in July to -$2.89 in March. The pattern of seasonality has become more pronounced in 1986 and 1987.

The basis was weakest--cash prices were further below futures prices--in 1985 when demand and cash prices were unusually low. The strengthening in cattle prices during 1987 resulted in more months of positive basis. The Illinois direct basis averaged -$2.33 in 1985, but strengthened to $0.79 in 1987. The Peoria basis also was weakest in 1985 at -$2.79, and strengthened in 1987 to -$0.22.

**Implications for Producers.** Recent variation in basis patterns across years makes the average monthly basis a less reliable indicator. For example, the average basis for the period from 1983 through 1987 for Illinois direct cattle in May was $0.27, but it varied in individual years from -$5.00 in 1985 to $3.48 in 1987. One of the months with the greatest basis variation, May illustrates the largest potential basis risk.

During 1986 and 1987, Illinois livestock prices had a strong basis pattern, which should have resulted in larger-than-expected prices from hedging. The strong basis was caused by the strong cash prices in relation to price expectations as reflected in futures prices. This strong basis pattern may not continue once cash prices match expectations more closely.

Producers need to be aware of the basis risk when placing a hedge. If they use the futures market regularly, they should keep a record of the difference between their own cash prices and nearby futures. They should evaluate the price secured by placing a hedge if the basis weakens to a recently observed minimum in order to determine if a pricing opportunity is still worthwhile. They should also be aware that the basis risk is greater in months when deliveries are not made.

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