

Federal Reserve Bank of Dallas February 1985

Texas Cattle Slaughter Shortens Nation's Cattle Cycle

The size of the nation's cattle herd typically follows a well-defined cycle lasting from 9 to 11 years. The current cycle is departing from this pattern. Elevated levels of slaughter have kept the herd from having the normal pattern of growth. Texas ranchers increased cattle slaughter in the past year to a greater extent than the rest of the nation did. The primary cause for higher Texas slaughter was the damage to forage as a result of the recent drought.

The U.S. herd reduction has improved the market for beef. Many Texas cattlemen may not be able to take full advantage of the expected rise in beef prices, however, because of their greater need to hold animals off the market to rebuild herds.

Cattle Cycles

Since the turn of the century, U.S. cattle numbers have followed pronounced cycles. During the first six to seven years of a cycle, the total herd increases; then come three to four years of liquidation.

The cattle cycle illustrates the capital goods aspect of beef production. A capital good can be defined as a good that is durable and whose stock cannot be adjusted instantaneously or costlessly. The rancher cannot respond to higher prices by immediately increasing supply to the market. Instead, the rancher reacts to higher prices by retaining heifers and building the herd. Such actions forgo current income for higher expected returns later. Eventually the herd is large enough for

supply to the market to increase. As a result, prices begin to fall. Reacting to the lower prices, ranchers reduce their cattle herds. Finally, the herd and supply to the market shrink. Prices then rise, and the cycle begins again.

The current cattle cycle has departed from the pattern of earlier cycles. Herd liquidation began much earlier than in previous cycles, partly because of changes in the Federal Government's dairy programs, a decline in beef consumption, availabil-

ity of large supplies of pork and chicken, higher feeding costs, and drought in Texas. The drought reduced the quality and quantity of forage, forcing some Texas ranchers to dump cattle on the market. Slaughter in Texas has increased substantially, while the U.S. level has held fairly steady. In 1984, Texas cattle slaughter was 12.8 percent above the previous year. For the rest of the nation, the increase was only 1.4 percent.

(Continued on back page)

Large Debt Loads Hurt Texas Agriculture

Farmers and ranchers in Texas, like those in the rest of the nation, have accumulated large debts over the past several years. The combination of low real farm income, high real interest rates, declining farmland values, and weak export demand has recently raised questions regarding the solvency of farmers and ranchers with high debt-to-asset ratios. A possible implication for Texas farming is that operators who are unlikely to continue in agriculture may account for over 10 percent of total annual farm receipts in the state.

Aggregate Debt-Asset Ratios Misleading

A farmer's debt-asset ratio, often termed "leverage," is frequently used as a measure of solvency and is considered an indicator of financial risk. With few exceptions, operators with debt ratios of 70 percent or greater are

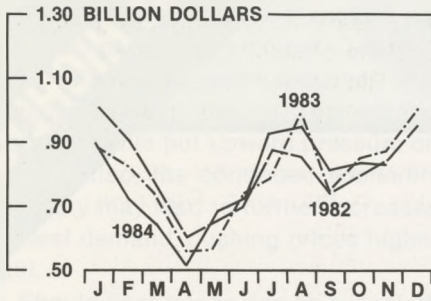
unable to survive in the current economic environment. For example, a farmer with \$1,000,000 in assets but \$700,000 in debt (at an interest rate of 10 percent) would have to receive a 7-percent rate of return on assets just to meet debt service obligations. If this operator received only a 3-percent rate of return on assets, the average return for U.S. agriculture, he would be incurring annual losses of at least \$40,000—or over 13 percent of his equity.

Nationwide, the debt-asset ratio for agriculture has been steadily increasing since 1948, reaching 21.6 percent as of January 1, 1984. The Southern Plains (Texas and Oklahoma) showed an aggregate debt-asset ratio of 14.3 percent in 1984, smallest among all 10 regions covered in a recent report from the U.S. Department of Agriculture (USDA). While this would seem to in-

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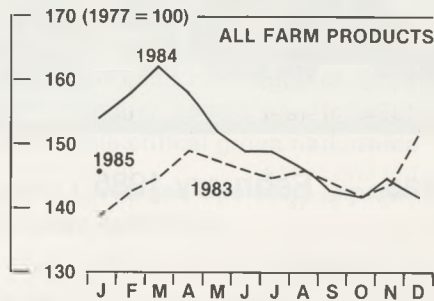
PRIME INDICATORS OF THE TEXAS AGRICULTURAL ECONOMY

TEXAS CASH RECEIPTS



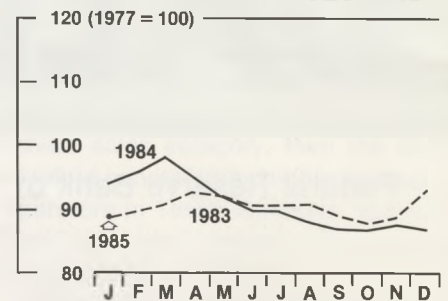
SOURCE: U.S. Department of Agriculture.

INDEX OF PRICES RECEIVED: TEXAS



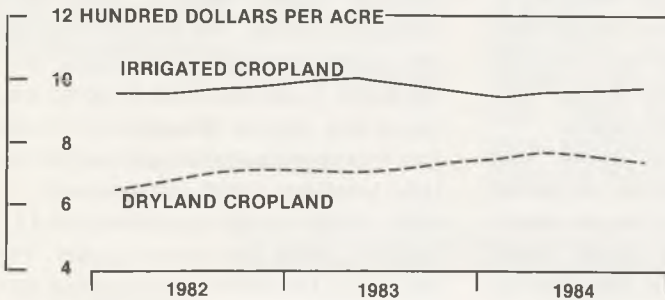
SOURCE: U.S. Department of Agriculture.

PRICES RECEIVED/PRICES PAID¹



1. Prices received by farmers in Texas divided by prices paid by farmers nationwide (No separate series exists for prices paid in Texas).
SOURCES: U.S. Department of Agriculture.
Federal Reserve Bank of Dallas.

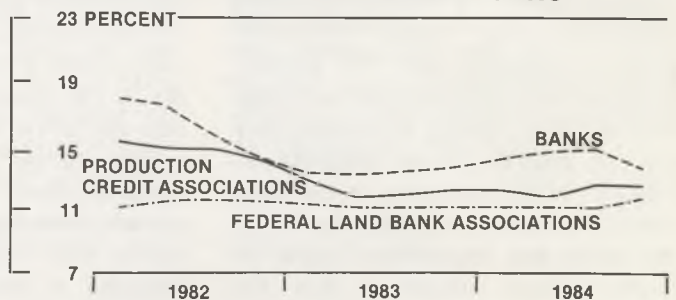
TEXAS FARM REAL ESTATE VALUES¹



1. 3 quarter centered moving average.

SOURCE: Quarterly Survey of Agricultural Credit Conditions,
Federal Reserve Bank of Dallas.

INTEREST RATES ON TEXAS FARM LOANS¹



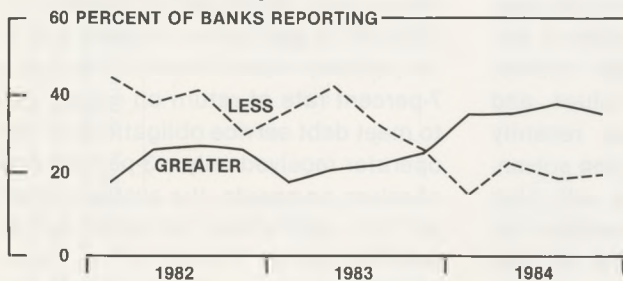
1. FLBA rates are for farm real estate loans.

SOURCES: Quarterly Survey of Agricultural Credit Conditions,
Federal Reserve Bank of Dallas.
Federal Credit System.

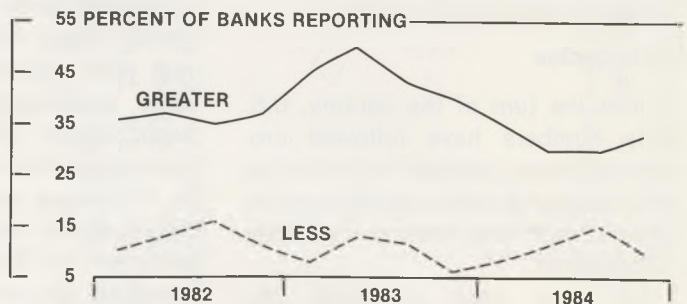
ELEVENTH DISTRICT AGRICULTURAL LOANS

Bankers report whether the variable is "greater," "the same," or "less" than a year ago. Percent reporting "greater" or "less" are depicted below.

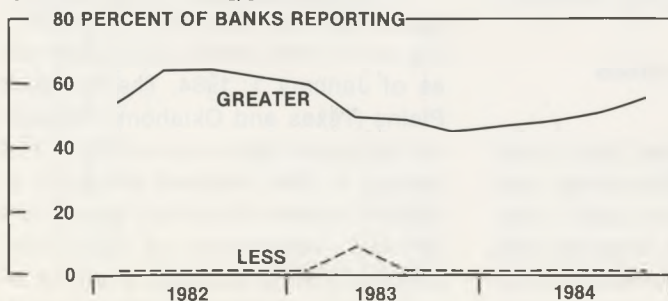
DEMAND FOR LOANS *



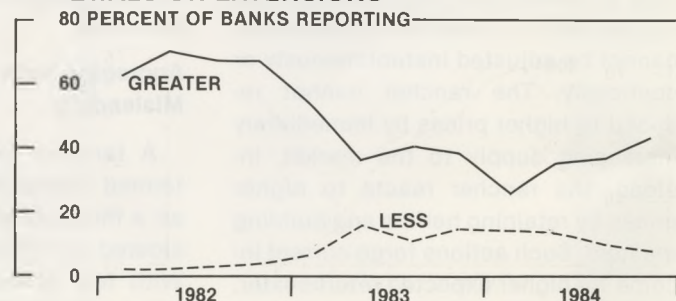
AVAILABILITY OF FUNDS *



COLLATERAL REQUIRED *



RENEWALS OR EXTENSIONS *



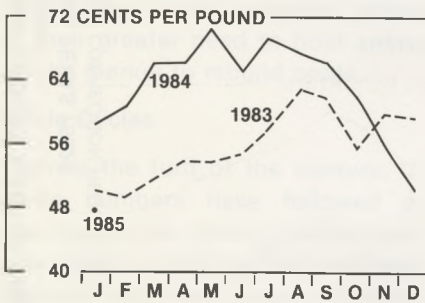
* SOURCE: Quarterly Survey of Agricultural Credit Conditions,
Federal Reserve Bank of Dallas.

AGRICULTURAL BRIEFS

- Average interest rates on both long-term and short-term agricultural loans by Eleventh District banks dropped about one percentage point during the fourth quarter of 1984. Interest rates on agricultural production loans, for example, averaged 13.67 percent by the end of the fourth quarter of 1984, compared with 14.86 percent three months earlier. Slower growth of the U.S. economy during the third quarter caused a decline in interest rates in national credit markets, which was soon reflected in District agricultural loan rates.
- Land values in the District, on average, began to slip during the fourth quarter of 1984. From the third quarter to the fourth quarter of last year, the average adjusted values for District dry cropland, irrigated cropland, and rangeland declined 2.4 percent, 0.6 percent, and 1.9 percent to \$761, \$1,023, and \$627 per acre, respectively. The likely causes of the decline are the relatively numerous tracts of land on the market, the low returns to agricultural production in 1984, and the generally weak agricultural outlook for 1985.
- Unusual freezes and heavy snowfall in Texas have resulted in pockets of significant losses. A freeze in the Lower Rio Grande Valley heavily damaged the lettuce and celery crops. In areas east of San Antonio, the weight of 12 inches or more of snow collapsed barns and poultry houses. One county in that area, Gonzales, reported \$2 million of damage.
- Texas beef producers had 2,310,000 cattle and calves on feed as of January 1, 1985, a new record for that time of year. The types of cattle on feed indicate that the liquidation phase of the current cattle cycle seems to be continuing. During this phase, heifers are sent to feedlots rather than retained for calf production. The number of steers and steer calves on feed was actually down 1 percent in January 1985 compared with January 1984, but heifers and heifer calves on feed rose 68 percent in the same period. The indication is that the drought-related placement of steers into feedlots from pastures has ended but there is no move yet by cattlemen to stabilize herd size by withholding heifers for breeding purposes.

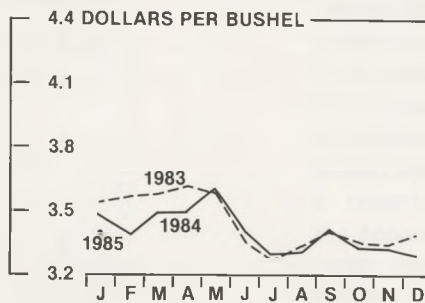
TEXAS COMMODITY MARKET PRICES

UPLAND COTTON



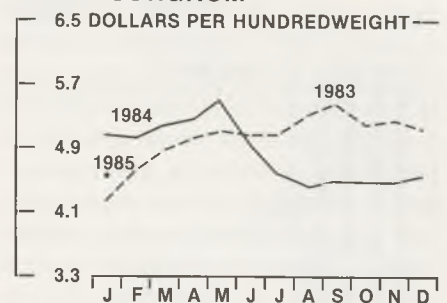
SOURCE: U.S. Department of Agriculture.

ALL WHEAT



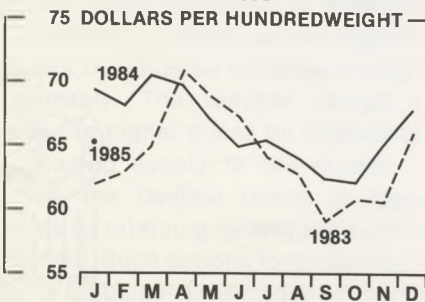
SOURCE: U.S. Department of Agriculture.

GRAIN SORGHUM



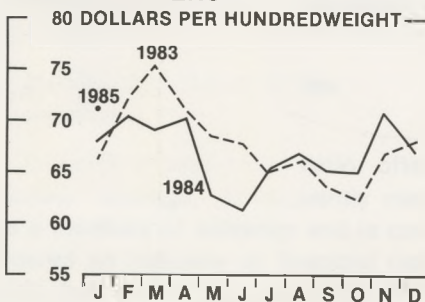
SOURCE: U.S. Department of Agriculture.

SLAUGHTER STEERS



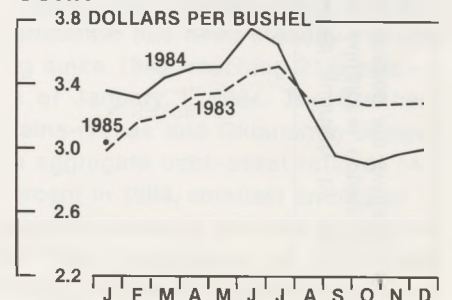
SOURCES: Texas Department of Agriculture.
Federal Reserve Bank of Dallas.

FEEDER STEERS



SOURCES: Texas Department of Agriculture.
Federal Reserve Bank of Dallas.

CORN



SOURCE: U.S. Department of Agriculture.

Cattle (cont.)

Outlook

The elevated level of slaughter appears to have run its course. The U.S. herd size has been reduced, and slaughter is diminishing. This drop in supply should put upward pressure on prices. Also, the continued economic recovery may lead to further increases in beef demand, pushing prices higher still.

Should beef prices rise as expected, the demand for cattle to be fed will remain strong. As a result, Texas feeder cattle suppliers will be in a profitable situation. Ranchers who have liquidated their herds, however, will find rebuilding expensive.

Roger H. Dunstan

Debt (cont.)

dicating that the region's agricultural economy is in relatively good financial condition, analysis shows that 6.9 percent of the farmers and ranchers in the Southern Plains had ratios of 70 percent or greater, compared with 6.6 percent in this critical group nationwide.

Highly Leveraged Operators Important to Texas Agriculture

An estimate of the proportion of Texas agricultural receipts generated by farmers and ranchers with debt-asset ratios of 70 percent or greater can be obtained from the Census of Agriculture and by making some assumptions. The 1978 Census of Agriculture provides data on the number of Texas farmers in each sales class, while the USDA supplies national estimates of the proportion of operators with debt-asset ratios of 70

percent or greater in each sales class. If the national estimates are indicative of Texas agriculture and if the midpoint of each sales class interval is considered a reasonable approximation of average sales within a particular sales category, then the cash receipts generated by highly leveraged operators in Texas represent 10.5 percent of total annual agricultural receipts in the state.

The high debt repayment obligations faced by farmers and ranchers in the critical group may force a number of them to leave agriculture in 1985, while the remainder must improve their cash flow position by some combination of debt refinancing and asset sales. However, such asset sales will further weaken sluggish markets for farmland and agricultural machinery.

—Eric J. Weigel

The views expressed are those of the authors and do not necessarily reflect the positions of the Federal Reserve Bank of Dallas or the Federal Reserve System.

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