West Texas: No Stranger To Drought

The dry conditions in West Texas have been much in the news over the last six months. Drought indexes indicate that much of West Texas is undergoing drought, although it is not as severe as some assessments have suggested. Crop farmers and ranchers will suffer significant losses but government programs are available to cushion the losses. While the magnitude of the losses cause individual hardships, the total projected losses are only a tiny fraction of annual Texas agricultural receipts.

Measuring Drought

Two broad classifications of drought are meteorologic drought and agricultural drought. Meteorologic drought, in its simplest definition, is when no rain falls for a prolonged period of time. Agricultural drought takes the timing of rains into account as well as the amount. Meteorological drought can be measured with the Palmer Drought Severity Index (PDSI), a long run measure of moisture conditions, while agricultural drought can be measured by the Crop Moisture Index (CMI), a modified version of the PDSI. The two indexes tell essentially the same story for the West Texas drought counties, which include the Trans-Pecos area and parts of the High Plains and Edwards Plateau. Because the CMI is a short term measure, the PDSI gives a clearer picture of the severity of the current West Texas drought. The PDSI classifies droughts as incipient, mild, moderate, severe, or extreme.

History shows that the West Texas area is no stranger to drought. Examining the monthly PDSI since 1931 for the Trans-Pecos region of Texas shows that there have been two periods of very dry conditions. One extended from September 1933 to August 1936. It included 8 months of extreme drought and 29 months of less disastrous drought. An even more prolonged drought lasted from December 1950 to January 1957. In addition, hardly a year between 1957 and 1980 did not contain at least some months of drought. With this climatological record, all ranchers and farmers in the Trans-Pecos area of Texas have some experience with “abnormally dry” conditions.

Damage Estimates

Crop farmers suffer economic losses during a drought because of lower crop yields. The major crops of the West Texas drought area are cotton, wheat, sorghum, alfalfa, oats, and barley. Calculating crop damage involves estimates of acres in production, expected drought-influenced yields, baseline yields (1981) and current market prices. Taking reasonable approximations of these factors, crop farmers in the West Texas drought counties incurred an estimated $70 million economic loss.

Ranchers incur losses because of reduced weight gain by their animals, drought-stress death loss, and possibly lower prices for animals caused by large distress marketings. Death losses are usually excluded from loss calculations because the Farmers Home Administration (FmHA).

PIK Program Income Estimates

The Payment-in-Kind (PIK) program was instituted by the Federal government last January as a means to support farm income and to reduce surplus commodities by cutting production. Currently, the government is in the process of transferring title to these commodities. How are farmers’ incomes in Texas going to increase as a result?

Income estimates were calculated using average statewide yields for the return on PIK acres, current prices (with some adjustments for quality) and the number of acres idled under PIK. The results show that corn and sorghum farmers will receive around $206 million or over $156 per acre. Wheat producers will receive $155 million, about $83 an acre. Rice farmers receive only $48 million in in-kind payments, but this is almost $300 per acre or $24,000 per farm. Cotton growers will get over $225 million or near $110 per acre. In total, Texas farmers will share around $637 million in in-kind payments. This compares to $9.7 billion in cash receipts from farm marketings in 1982.

—Hilary Smith
PRIME INDICATORS OF THE TEXAS AGRICULTURAL ECONOMY

TEXAS CASH RECEIPTS
110 MILLION DOLLARS
ALL FARM PRODUCTS
- 110 MILLION DOLLARS
- 170 (1977 = 100)
- 120 (1977 = 100)

INDEX OF PRICES RECEIVED: TEXAS
170 (1977 = 100)
ALL FARM PRODUCTS

PRICES RECEIVED/PRICES PAID
120 (1977 = 100)

SOURCE: U.S. Department of Agriculture.

TEXAS FARM REAL ESTATE VALUES
12 HUNDRED DOLLARS PER ACRE
IRRIGATED CROPLAND
DRYLAND CROPLAND

INTEREST RATES ON TEXAS FARM LOANS
29 PERCENT
BANKS
PRODUCTION CREDIT ASSOCIATIONS
FEDERAL LAND BANK ASSOCIATIONS

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
60 PERCENT OF BANKS REPORTING

AVAILABILITY OF FUNDS
55 PERCENT OF BANKS REPORTING

COLLATERAL REQUIRED
80 PERCENT OF BANKS REPORTING

RENEWALS OR EXTENSIONS
80 PERCENT OF BANKS REPORTING
AGRICULTURAL BRIEFS

• High plains cotton producers received another weather jolt as a September cold snap damaged the cotton crop. Reports indicate the freeze will reduce yields by 15–20 percent. October estimates of the Texas cotton crop are down 4 percent over September's, a drop of nearly 100,000 bales. Assuming a price of $0.55 per pound, the lost production is valued at nearly $25 million.

• Interest rates on farm operating loans at commercial banks edged upward during the third quarter in response to a tighter money market. The rate for All Farm Operating Loans increased 0.2 percentage points to 13.4 percent, but was still 2.2 percentage points below the prevailing rate a year ago.

• Dairy industry legislation currently being considered by Congress contains a provision to pay dairymen to cut back production. If this bill passes, dairy farmers will have incentives to reduce their herds, freeing up a large number of replacement heifers. Many of these could end up being placed on feed, thus boosting beef supplies next year and driving down prices.

• Texas ranchers continue to place more cattle on feed while the rest of the nation cuts back. Texas placements on feed during the third quarter were up 12 percent over a year ago, but the other 12 major cattle producing states recorded a 9 percent decline. Texas cow-calf operators are holding feeder cattle longer, hoping for better prices in the future, rather than selling at a loss.

TEXAS COMMODITY MARKET PRICES

<table>
<thead>
<tr>
<th>COMMODITY</th>
<th>PRICE PER UNIT</th>
<th>SOURCE</th>
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<tbody>
<tr>
<td>UPLAND COTTON</td>
<td>72 CENTS</td>
<td>U.S. Department of Agriculture</td>
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<tr>
<td></td>
<td>PER POUND</td>
<td></td>
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<tr>
<td>ALL WHEAT</td>
<td>4.4 DOLLARS</td>
<td>U.S. Department of Agriculture</td>
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<tr>
<td></td>
<td>PER BUSHEL</td>
<td></td>
</tr>
<tr>
<td>GRAIN SORGHUM</td>
<td>6.5 DOLLARS</td>
<td>U.S. Department of Agriculture</td>
</tr>
<tr>
<td></td>
<td>PER HUNDREDWEIGHT</td>
<td></td>
</tr>
<tr>
<td>SLAUGHTER STEERS</td>
<td>75 DOLLARS</td>
<td>Texas Department of Agriculture</td>
</tr>
<tr>
<td></td>
<td>PER HUNDREDWEIGHT</td>
<td>Federal Reserve Bank of Dallas</td>
</tr>
<tr>
<td>FEEDER STEERS</td>
<td>80 DOLLARS</td>
<td>Texas Department of Agriculture</td>
</tr>
<tr>
<td></td>
<td>PER HUNDREDWEIGHT</td>
<td>Federal Reserve Bank of Dallas</td>
</tr>
<tr>
<td>CORN</td>
<td>3.8 DOLLARS</td>
<td>U.S. Department of Agriculture</td>
</tr>
<tr>
<td></td>
<td>PER BUSHEL</td>
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</table>
Drought Damage (cont.)

the federal agency which provides emergency loans to ranchers, considers drought-related death loss to be a "management decision" on the part of the rancher. Also, the price effects of distress marketing are small because the number of cattle being forced onto the market is low compared to the size of the beef industry in Texas. Lack of weight gain and higher costs associated with the poor grazing conditions are absorbed by the rancher. These losses are nearly impossible to measure.

As a consequence, there are no precise figures for the drought impact on Texas ranchers. The Office of the Governor for the state of Texas uses $183 million as the inventory value of the livestock in the 20 hardest hit counties. Cumulative livestock feeding and marketing losses probably do not exceed 25 percent of the value of the inventory, or around $46 million. The total losses for both crops and livestock therefore would be in the neighborhood of $116 million. While these large losses cause the individuals involved great hardship, they represent about one-tenth of one percent of yearly Texas agricultural receipts. There is very little statewide impact other than to reinforce the PIK induced upward pressure on cotton prices.

Government Assistance

Over 20 counties in West Texas have been approved for disaster assistance from FmHA. In addition, cotton, wheat and sorghum farmers in these counties who participated in the Payment-in-Kind (PIK) program will receive more than $40 million dollars worth of commodities for the acreage they set aside. Despite intensive promotion by the FmHA, by mid-October only three applications for emergency loans to ranchers under the FmHA's Emergency Loan Program had been filed and only 11 application forms had been requested. The United States Department of Agriculture has resisted requests to implement the Emergency Feed Program, which provides grants to ranchers for feed losses or needs. Congress, however, may force implementation.

Conclusion

To summarize, there is certainly a moderate and continuing drought in West Texas, but historical data suggest that this drought is neither unusual nor particularly acute. Crop farmers have suffered losses, but these losses have been mitigated to an extent by the PIK program. Livestock ranchers also sustained losses but probably not as large. Current federal programs available to ranchers are unpopular and a program ranchers desire has yet to be put in force.

—Hilary Smith