

**STANDARDIZED PERFORMANCE
ANALYSIS OF COTTON PRODUCTION
IN THE TEXAS HIGH PLAINS**
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Abstract

The Standardized Performance Analysis (SPA) management tool was applied to a sample of cotton farming operations in the Texas High Plains (THP) in order to determine the usefulness of the program in analyzing multiple enterprise operations. Financial benchmarks for the 1995 and 1996 dryland and irrigated crops have been established on both an income statement and balance sheet basis. Other financial indicators of performance were also determined for both crops. Comparing crop enterprises across the two years in the study showed that in both 1995 and 1996, irrigated cotton enterprises in the THP were more financially successful than dryland cotton enterprises. In addition, looking at balance sheet and performance measures in the two years, irrigated cotton farms were more financially viable than dryland cotton farms.

Introduction

Texas is the nation's leading cotton producer, producing almost two times more cotton lint than the next closest competitor - California. Cotton contributes more cash receipts to the Texas economy than any other field crop and is second only to cattle in total agricultural cash receipts. The THP contributes more cotton to the Texas economy than any other region in the state. Eight of the top ten cotton producing counties in Texas in 1995 were located in the Texas High Plains (THP) region and accounted for 38.5% of all upland cotton produced in Texas in 1995 (Texas Agricultural Statistics, 1995). In 1996, the top ten upland cotton producing counties in Texas were in the THP and accounted for 54.6% of upland cotton production in Texas (Texas Agricultural Statistics, 1996).

Due to the importance of cotton and other field crops to the THP region, the Texas Agricultural Extension Service and the Department of Agricultural and Applied Economics at Texas Tech University developed a method for financial, production, and marketing analysis of farming operations in the region. Standardized analysis of these three important areas of a farming operation not only allows producers to determine the performance of their operation, but it also allows farmers the ability to compare their operations to

other operations. Thus, the Standardized Performance Analysis (SPA) method of financial, production, and marketing analysis was adapted to crop production.

Methods and Procedures

Standardized Performance Analysis

Standardized Performance Analysis - Multiple Enterprise (SPA-ME) has been developed by the Department of Agricultural and Applied Economics at Texas Tech University and the Texas Agricultural Extension Service. The SPA method of analysis was originally developed for use by cow/calf operations in response to a request from the National Cattlemen's Association for a management tool for their members. The goal of the original SPA program was to provide producers with information specific to their individual business needs. The SPA analysis would allow for a "comparative analysis between production years, different producers, production regions, and production systems" (National Cattlemen's Association, 1995, p. 6).

The second generation of the SPA programs, SPA-ME, incorporates total farm and ranch information into a whole farm analysis, as well as providing the ability to analyze both crop and livestock enterprises within the operation. The program allows the user to construct accrual adjusted total farm financial statements of an operation. All accounting methods and financial statement preparation follow the recommendations of the Farm Financial Standards Council. Reconciled total farm financial statements are allocated to enterprises within the operation, usually specific crops in the operation. The enterprises are divided into sub-enterprises, usually based on a particular farm or field within that crop enterprise. The financial information allocated to the enterprise is then further allocated to the sub-enterprises. By completing a total farm analysis in addition to the analysis of enterprises and sub-enterprises, producers have the ability to identify any potential problem areas within their operation.

Field Testing

The SPA-ME prototype software program is currently in the second year of field testing. The field testing stage of this project has been concentrated in the THP region, with emphasis on cotton producing operations due to the important role of cotton production to the THP economy and the diversity of THP cotton farms. The information gathered in the field testing phase is being used to adapt the SPA method of farm financial and production analysis to farming operations with multiple enterprises. A data base of results is being constructed so that participating producers can compare their operations to benchmark measures across the THP region.

Participants in the study provide financial information that includes beginning and ending fiscal year balance sheets, income statements, IRS tax schedules, and any other financial information, including loan payment schedules and

schedules of purchase cost of real estate and other capital assets. In addition to financial information, participating producers provide gin summaries containing cotton classing information for the crop year and end of year inventories for crops in storage. Planting information for each farm enterprise, including varieties planted, planting rates, irrigation information, chemical applications, and other related information is also required to complete the analysis.

Study Area

The study area for this research consists of farming operations in the Texas High Plains region, with an emphasis on cotton farming operations in the Southern High Plains (SHP) region. According to Texas Agricultural Statistics, crop reporting district 1-S is defined as the SHP region. Counties included in the SHP region are Andrews, Bailey, Cochran, Crosby, Dawson, Gaines, Glasscock, Hockley, Howard, Lamb, Lubbock, Lynn, Martin, Midland, Terry, and Yoakum counties. Due to the production similarities of three counties in crop reporting district 1-N, the Northern High Plains, to the SHP region, these counties in district 1-N have been included for the purposes of this study. Those counties are Hale, Briscoe, and Floyd counties.

Benchmarks

Production and financial benchmarks for both irrigated and dryland cotton production in the THP are reported for the 1995 and 1996 crop years. The purpose of establishing the benchmarks is to allow producers to make a comparative analysis of their operation over time, as well as to make comparisons to other farming operations in the region. The benchmarks are constructed using actual farm level data gathered from the SPA method of farm analysis. Production benchmarks include average farm size and production levels for both dryland and irrigated cotton crops, income statement analysis, balance sheet analysis, and profitability measures. The benchmarks in this report have been limited to only operations with leased land. Owned land operations are not included in this report because the number of observations for these farms was limited.

Income statement analysis using the SPA method contains analysis of revenues from crop sales, government payments, crop insurance, and other revenue, as well as cash and non-cash expense items. Cash expenses are calculated, as well as depreciation, interest expense, and owner labor and management expense. Finally, average net farm income and unit cost of production for the participating farms is determined.

Balance sheet and profitability measures for dryland and irrigated cotton are reported on both a cost and market valuation. Investment per acre, liabilities per acre, and owner equity are the balance sheet benchmarks that are presented. Performance measures for the participating

producers include the following financial ratios: equity to asset ratio, debt to equity ratio, return on assets (ROA), and return on equity (ROE). A comparison of the average ROA to ROE determines if debt is being used profitably.

Production Benchmarks

Table 1 shows the number of producer observations used in this report. In 1995 ten participating producers had dryland cotton sub-enterprises within their operations and twelve participating producers had irrigated cotton sub-enterprises. There are fewer observations in 1996, with six producers having dryland cotton sub-enterprises, while ten producers had irrigated cotton sub-enterprises. As seen in Table 1, the majority of the land in the sample is leased on a crop share basis. The typical crop share agreement in this sample was 75% of total production going to the tenant. In addition, most of the farming operations in the sample were operated as sole proprietorships. Other producer enterprises included milo, wheat, alfalfa, cattle, grazing, and CRP land enterprises. Despite the diversity of the operations in this sample, there were only slight differences in production practices among the cotton farms.

Tables 2 and 3 show the production information for leased land in both 1995 and 1996 for dryland and irrigated cotton enterprises. The acres per observation listed in the tables represents the farmed acreage for each sub-enterprise in the sample. The crop share lint yield per acre includes only the producer's crop share portion of total lint. The average size per observation declined on both irrigated and dryland cotton farms from 1995 to 1996. Average crop share yield per acre increased from 182 pounds per acre in 1995 on dryland operations to 376 pounds per acre in 1996. Irrigated cotton yields increased from 381 crop share pounds per acre in 1995 to 538 pounds per acre in 1996. However, most of the operations in this sample were located in the Southern High Plains area of the THP. Therefore, the yields shown in this sample may not be representative of the entire THP.

1995 Income Statement Analysis Benchmarks

Income statement analysis for the 1995 dryland and irrigated cotton crops in the THP are shown in Tables 4 and 5, respectively. For the 1995 dryland cotton crop, revenue besides cotton lint sales played an important role. These other sources of income accounted for almost 23% of the total accrual adjusted revenue of \$162.63 per acre. Government payments accounted for 5.6% of total revenue, crop insurance proceeds accounted for 5.4% of revenue, and all other sources of income attributed 12% to the total gross revenue of the operation. Other sources of revenue included hedging income, custom hire earnings, and cooperative distributions. The average price received for cotton lint was calculated to be \$0.69 per pound for the 1995 dryland cotton crop. Seed sales are not reported because most producers in this sample used seed sales to

pay ginning expenses and did not report the two items separately.

The average total operating cost was \$173.35 per acre for the 1995 dryland cotton crop. Costs other than cash operating costs, including owner labor and management, interest, depreciation, and all other non-cash costs represented 33.7% of total expenses. Owner management expense was responsible for 17.5% of total expense, 3.8% of costs were attributed to interest expense, and depreciation was 13.1% of total expenses. The net income for dryland cotton operations in 1995 was -\$10.72 per acre or -\$0.06 per pound. The total unit cost of production for the 1995 dryland crop was \$0.74 per pound. Comparing the unit cost of production to sales revenue only, there was an average loss for the operators of -\$0.05 per pound.

The 1995 irrigated cotton crop had a gross accrual revenue per acre of \$310.83. Revenue other than cotton lint sales accounted for 18.5% of total revenue. Government payments were responsible for 3.5% of total revenue, while crop insurance proceeds accounted for 3.3% of revenue. Other revenue added 11.7% to the total. The price for irrigated cotton was calculated to be \$0.67 per pound.

Approximately 30.9% of the total per acre operating cost of \$288.70 on irrigated cotton farms in 1995 was composed of expenses other than direct crop production. Owner labor and management was 16.8% of total cost, while interest expense and depreciation were 4.3% and 10% of total cost, respectively. Net income was \$22.76 per acre or \$0.06 per pound. The unit cost of production for the irrigated operations was \$0.60 per pound.

1996 Income Statement Analysis Benchmarks

Table 6 contains the income statement analysis for the 1996 dryland cotton crop in the THP. In 1996, total gross revenue was \$298.31 per acre, almost double the gross revenue total in 1995. Government payments, crop insurance, and other revenue accounted for 14.3% of total revenue. Therefore, revenue other than crop sales was less significant to the dryland cotton operation in 1996 than in 1995. This was due to the fact that yields on dryland farms increased from 1995 to 1996. Crop insurance payments and other revenue declined in 1996 and accounted for a smaller portion of the total revenue in 1996. In 1995, these two sources of income were \$28.20 per acre, while in 1996 they only contributed \$24.99 per acre to gross revenue for the dryland farmer. There was, however, a significant increase in the dollar value per acre of government payments for the dryland operation. In 1996, government payments amounted to \$17.48 per acre in revenue. This increase of almost 52% from 1995 to 1996 could in part be attributed to refunds of deficiency overpayments made in 1994. This caused 1995 payments to decrease when combined with the payments made to refund the Farm Services Agency for overpayments. Total sale price of cotton lint for these

observations was \$0.68 per pound, almost the same as the previous year.

Total dryland operating cost in 1996 was about \$214.74 per acre. Total cost consisted of approximately 34% additional costs other than production costs. Of these costs, owner labor and management declined \$4.08 per acre in 1996. In 1995 the total cost was \$30.34 per acre, which decreased in 1996 to \$26.26. Interest expense and depreciation in 1996 was \$10.79 per acre and \$24.77 per acre, respectively. These expenses were responsible for about 16.5% of total cost in 1996 as opposed to 16.9% in 1995.

Total dryland net income in 1996 was \$83.57 per acre and \$0.22 per pound. In 1995, THP dryland operations were not profitable, as they experienced a loss of \$10.72 per acre. The per unit cost of producing dryland cotton lint in 1996 was found to be \$0.45, a decrease of about \$0.29 per pound from 1995. The decrease in the unit cost of production was primarily due to increased yields in 1996. Accounting for only the sale of cotton lint in 1996, THP farms were still profitable, recognizing \$0.23 per pound over the cost of production. This was not the case in 1995, as primary product sales were less than the unit cost of production.

Table 7 shows the income statement analysis for the 1996 irrigated cotton crop. Irrigated cotton farming operations in 1996 earned \$425.91 per acre in total accrual revenue. Approximately 85% of this revenue was from the sale of cotton lint. Other sources of revenue included government payments, which were about 6.2% of total revenue in 1996 or \$26.77 per acre. Crop insurance proceeds were \$3.56 per acre in 1996. This decrease from 1995 was expected, as the 1996 crop was more productive than the 1995 crop. Other revenue was almost unchanged from 1995 to 1996 at \$35.78 per acre, or 8.4% of total revenue.

Total operating cost in 1996 on the irrigated cotton farms increased by about \$20 per acre to a total of \$308.91. Owner labor and management was comparable in 1996 to the previous year's living expense with a total of \$49.69 per acre, which was about 16% of total cost. Interest expense was also close to the previous year's expense. Total interest in 1996 for irrigated cotton farms was \$11.42 per acre, making up 3.7% of total cost for the operation for the crop year. A considerable difference in the expenses from 1995 to 1996 is present in depreciation expense. Depreciation per acre was \$41.50 in 1996, an increase of \$12.58 per acre. Depreciation was 13.4% of total operating cost, which was 3.4% higher in 1996 than in 1995.

Net income for irrigated cotton operations in the THP in 1996 was \$117 per acre or \$0.22 per pound. Net income increased in 1996 by \$94.24 per acre or \$0.16 per pound. Unit cost of production on the irrigated crop declined by \$0.16 per pound to a unit cost of production of \$0.44 per pound. The profit realized in 1996 was \$0.23 per pound

over the unit cost of production when accounting only for cotton lint sales.

Income Statement Analysis Summary

Comparing the 1995 dryland and irrigated crops in the THP shows that irrigated cotton was the more profitable cotton enterprise. Net income was \$33.48 per acre higher on irrigated cotton farms than dryland cotton farms. Looking strictly at the unit price received for cotton on the different farms, the irrigated cotton price was \$0.02 per pound lower than the price received on dryland cotton farms. However, crop share lint yields per acre were about 48% higher on irrigated cotton farms. The unit cost of production was considerably lower for irrigated cotton than for dryland cotton.

Non-crop sale revenue sources were important to both dryland and irrigated cotton farms in 1995. The per acre government payments for both dryland and irrigated cotton farms were similar in 1995. However, government payments made up a larger portion of total revenue on dryland cotton farms than on irrigated cotton farms. Despite the dollar value per acre being higher on irrigated farms, crop insurance revenue was also a more significant percentage of total revenue for dryland farms than irrigated farms in 1995. Total non-crop sale revenue contributed 23% to dryland revenue in 1995 and 18.5% of total revenue for irrigated cotton enterprises.

Total expenses for the irrigated operations in the THP in 1995 were 60% higher than on the dryland cotton farms. However, owner labor and management expenses made up about the same percentage of total cost, as did interest expense, for the two operations in 1995. The largest difference in percentage of costs between dryland and irrigated cotton was found in depreciation expense.

Net income for the dryland and irrigated cotton farms was considerably higher in 1996 than in 1995. Both irrigated and dryland cotton farms were profitable in 1996, but once again, irrigated cotton farms were more profitable than dryland farms on a per acre basis. However, higher yields were instrumental in the performance of the irrigated cotton farms, as the irrigated farms in this sample had a lower net income per pound than the dryland farms. Average price received was higher for the dryland farms. The unit cost of production for the dryland cotton farms was higher in 1996 than on irrigated enterprises. Profit realized over the cost of production, looking at only sales revenue for the 1996 crop, was the same on both irrigated and dryland farms.

Government payments in 1996 made up almost an equal percentage of revenue for dryland and irrigated farms in the THP, yet the payments received per acre by the irrigated farms were \$9.29 per acre higher than those received by the dryland farms. However, crop insurance was much more important to the dryland farms than the irrigated farms. Dryland crop insurance payments were \$2.79 per acre

higher than on irrigated cotton farms. Other sources of revenue were about 52% higher as a portion of total revenue on irrigated cotton farms in 1996 than on dryland cotton farms.

Total operating cost in 1996 was approximately 70% higher on irrigated cotton farms than dryland cotton farms. Owner labor and management was 52.8% higher on irrigated cotton farms than on dryland cotton farms. Based on a dollar value per acre, interest expense was comparable on the two operations. There were large variations in depreciation expense across the dryland and irrigated operations in 1996. Depreciation was \$16.73 per acre higher in 1996 on irrigated cotton farms than on dryland cotton farms. Non-cash costs other than depreciation also made up about the same percentage of total costs on both operations in the 1996 crop year.

Income statement analysis of the dryland and irrigated cotton farms in 1995 and 1996 in the THP indicates that irrigated cotton operations were more financially viable than dryland cotton operations. Net incomes were higher in both 1995 and 1996 on the irrigated cotton enterprises in this sample. The unit cost of production was lower on irrigated cotton farms than on dryland cotton farms in both 1995 and 1996.

1995 Balance Sheet and Profitability Measures

Balance sheet and profitability measures for dryland and irrigated cotton crops were determined for 1995 and 1996 using the SPA method of analysis. Tables 8 and 9 show these measures for the 1995 dryland crop and irrigated crop, respectively. Discussion will be limited to the cost basis of valuation for the 1995 and 1996 cotton enterprises.

Average investment for the 1995 dryland cotton crop was \$249 per acre, with average liabilities of \$127 per acre. This gives an owner equity of \$122 per acre. The equity to asset ratio calculated from these averages was 49%. The debt to equity ratio of 104.10% means that the dryland operation on average has 4% more debt than equity in the operation. Finally, a comparison of the return on assets (ROA) to the return on equity (ROE) shows that the ratios are -1.68% and -8.79%, respectively. The ROE being less than the ROA indicates that the average dryland cotton operation is paying more to borrow money than is actually earned by borrowing the money. In 1995, this situation was due to the fact that the average dryland farmer reported a negative net income. If this pattern continues on a long term basis, it could prove to be detrimental to the operation.

Irrigated cotton operations in 1995 had an owner equity of \$241 per acre. Average investment in the operation was \$401 per acre and average liabilities were \$160 per acre. The equity to asset ratio of 60.1% indicates that owners had more equity in the operations than debt. The debt to equity

ratio of 66.39% shows that for every \$100 of equity in the operation, there is \$66.39 of debt. The ROA was 8.77% for the irrigated operations, and the ROE was 9.4%. Thus, debt was used profitably by irrigated operations in 1995.

Overall, based on balance sheet and performance measures, the irrigated cotton farms in 1995 appeared to be more financially viable than their dryland counterparts. Not only was debt used more effectively by the irrigated operations, there was more equity in the operation than in dryland cotton farms. Irrigated cotton farms' owner equity was almost double that of dryland cotton farms in 1995. In addition, debt levels when compared to equity were significantly less in irrigated cotton farms than dryland cotton farms.

1996 Balance Sheet and Profitability Measures

Tables 10 and 11 give the balance sheet and performance measures for the 1996 dryland cotton and irrigated cotton, respectively. Average investment in the 1996 dryland cotton crop was \$322 per acre, an increase of \$73 per acre on average over the 1995 dryland crop. Average liabilities decreased by \$17 per acre over the two crop years, from \$127 per acre in 1995 to \$110 per acre in 1996. Owner equity was \$212 per acre, an increase of about 58% over 1995.

The equity to asset ratio in 1996 for dryland operations increased to 65.84%. This percentage indicates a favorable change over the 1995 results. Another favorable change in the operations was the decreased debt to equity ratio, from 104.10% in 1995 to 51.89% in 1996. In 1996, dryland operations only had \$0.50 of debt for every \$1 of equity invested in the farm.

The ROA for 1996 was 29.30% and the ROE was 39.42%. This relationship shows that for these dryland cotton operations debt was used effectively. That is, borrowed equity in the operation generated more income than it cost the farmer to borrow. In 1995 the opposite was true for dryland cotton operations.

Irrigated cotton operations in 1996 had an average owner equity of \$260 per acre. This equity was only slightly higher than the 1995 equity. Average investment and average liabilities both decreased in 1996 for irrigated cotton farms. Average investment was \$366 per acre and average liabilities were \$106 per acre.

The equity to asset ratio in 1996 for irrigated farms was 71.04%, an increase of 10.94% over 1995. The debt to equity ratio decreased in 1996 to 40.77%, from 66.39% in 1995. Irrigated cotton farms owned close to \$0.26 per acre less per dollar of equity in 1996 than they did in 1995. ROA and ROE also increased in 1996. The irrigated cotton operation had an average ROA of 35.09% in 1996 and an ROE of 45%. Debt was once again used effectively by

these operations in 1996. The financial position of the irrigated cotton operation remained fairly stable from 1995 to 1996.

1995 and 1996 Balance Sheet and Performance Measures Summary

Analyzing both the 1995 irrigated and dryland cotton crops shows that overall the irrigated cotton operations were more financially stable than their dryland counterparts. The use of debt was profitable for irrigated cotton farms in 1995, while not profitable for dryland cotton operations in that crop year due to a negative net income. However, the dryland operations may have still used debt effectively, although not profitably, in 1995. Comparing the equity to asset ratios on both operations, the irrigated cotton farm had a greater equity interest in their operations compared to dryland cotton farms. The debt to equity (or leverage) ratios of the two differing operations show that dryland cotton farms were using more financial leverage compared to irrigated cotton farms in 1995.

In 1996, the dryland and irrigated cotton crops were more closely related. Debt was used profitably by both types of cotton farms in 1996, as shown by comparing the ROA to the ROE ratio in each case. Dryland cotton farms were once again more highly leveraged than irrigated cotton farms. Both irrigated and dryland cotton farms showed a significant improvement in performance from 1995 to 1996. Comparing all areas of performance, the 1996 crops were more financially sound, according to the analysis of the equity to asset ratios, debt to equity ratios, return on assets and return on equity. Despite improved performance in both operations, the irrigated cotton operation performed more effectively on average in both 1995 and 1996.

Summary

The SPA method of analysis is a useful tool in performing an integrated financial and production analysis on farming operations with multiple enterprises. The tool was successfully applied in two years to farming operations in the THP. Benchmarks for both the 1995 and 1996 irrigated and dryland cotton crops were calculated. Analysis of the benchmarks shows that the overall performance of irrigated cotton operations was better than that of the dryland cotton operations in the sample. Further research efforts will include revision of benchmarks as needed, an analysis of economies of size on the financial position of the operations in the THP, an analysis of the financial viability of operations in the High Plains, and case studies to show the usefulness of the SPA method of analysis for individual farming operations.

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Table 1. Statistical Information for Participating Producers - 1995 and 1996

	Number of Farmers	Total Farms in Sample	Total Lease Farms	Total Owned Farms
Dryland Cotton 1995	10	38	30	8
Irrigated Cotton 1995	12	38	34	4
Dryland Cotton 1996	6	22	19	3
Irrigated Cotton 1996	10	30	27	3

Note: No yield operations were dropped from the sample.

Table 2. Production Information from Texas High Plains Leased Land Observations 1995

	Dryland Cotton			Irrigated Cotton		
	High	Low	Avg	High	Low	Avg
Acres Per Farm	782	11	206	721	50	177
Lint Per Acre*	386	92	182	617	137	381

* Represents only the farmer's crop share portion of lint produced. Does not include landlord's portion of production.

Table 3. Production Information from Texas High Plains Leased Observations 1996

	Dryland Cotton			Irrigated Cotton		
	High	Low	Avg	High	Low	Avg
Acres Per Farm	317	22	138	550	33	161
Lint Per Acre*	666	124	376	872	236	538

* Represents only the farmer's crop share portion of lint produced. Does not include landlord's portion of production.

Table 4. Income Measures - Dryland Cotton Leased Observations 1995

	\$/Acre		
	High	Low	Avg
Gross Accrual Revenue	365.82	81.40	162.63
Primary Product Sales	280.56	60.27	125.40
Government Payments	35.61	0	9.03
Crop Insurance Proceeds	31.57	0	8.74
Other Revenue*	72.16	-4.19	19.46
Total Operating Cost	326.94	73.97	173.35
Cash Operating Expense	226.49	52.80	115.01
Depreciation	37.39	6.46	22.72
Non-Cash Costs**	24.08	-34.20	-1.25
Interest Expense	23.03	0	6.53
Owner Labor & Management	62.73	13.22	30.34
Net Income	111.42	-231.35	-10.72
	\$/Pound		
	High	Low	Avg
Gross Accrual Revenue	1.78	0.60	0.89
Primary Product Sales	0.75	0.06	0.69
Government Payments	0.18	0	0.05
Crop Insurance Proceeds	0.27	0	0.05
Other Revenue*	0.72	-0.04	0.11
Total Operating Cost	2.91	0.45	0.95
Cash Operating Expense	2.01	0.32	0.63
Depreciation	0.29	0.06	0.12
Non-Cash Costs**Interest Expense	0.11	-0.11	-0.01
Owner Labor & Management	0.56	0.07	0.17
Net Income	0.46	-2.06	-0.06
Unit Cost of Production***	2.68	0.36	0.74

* Other revenue includes cooperative distributions, interest income, hedging income, etc.

** Includes only accrual adjustments

*** Adjusted for non-primary product revenue

Table 5. Income Measures - Irrigated Cotton Leased Observations 1995

	\$/Acre		
	Hi	Low	Avg
Gross Accrual Revenue	571.49	154.99	310.83
Primary Product Sales	414.71	94.66	253.56
Government Payments	25.34	1.33	10.81
Crop Insurance Proceeds	268.79	0	10.19
Other Revenue*	131.33	-18.64	36.27
Total Operating Cost	382.30	174.11	288.07
Cash Operating Expense	263.16	136.16	199.18
Depreciation	101.94	11.45	28.92
Non-Cash Costs**	24.08	-59.44	-.80
Interest Expense	27.55	0	12.42
Owner Labor & Management	135.41	0	48.35
Net Income	316.27	-123.34	22.76
	\$/Pound		
	High	Low	Avg
Gross Accrual Revenue	1.60	0.62	0.82
Primary Product Sales	0.86	0.51	0.67
Government Payments	0.06	0	0.03
Crop Insurance Proceeds	0.88	0	0.03
Other Revenue*	0.39	-0.04	0.10
Total Operating Cost	2.03	0.31	0.76
Cash Operating Expense	1.41	0.24	0.52
Depreciation	0.33	0.03	0.08
Non-Cash Costs**	0.11	-0.10	0
Interest Expense	0.12	0	0.03
Owner Labor & Management	0.36	0	0.01
Net Income	0.54	-0.90	0.06
Unit Cost of Production***	1.59	0.13	0.60

* Other revenue includes cooperative distributions, interest income, hedging income, etc.

** Includes only accrual adjustments

*** Adjusted for non-primary product revenue

Table 6. Income Measures - Dryland Cotton Leased Observations 1996

	\$/Acre		
	High	Low	Avg
Gross Accrual Revenue	592.40	90.40	298.31
Primary Product Sales	444.20	75.86	255.84
Government Payments	48.86	2.16	17.48
Crop Insurance Proceeds	56.18	0	6.35
Other Revenue*	56.08	3.20	18.64
Total Operating Cost	327.60	123.00	214.74
Cash Operating Expense	209.56	86.59	141.65
Depreciation	42.09	6.62	24.77
Non-Cash Costs**	53.96	-6.73	11.27
Interest Expense	19.85	2.18	10.79
Owner Labor & Management	90.55	4.00	26.26
Net Income	247.77	-49.40	83.57
	\$/Pound		
	High	Low	Avg
Gross Accrual Revenue	1.00	0.70	0.79
Primary Product Sales	0.74	0.61	0.68
Government Payments	0.16	0	0.05
Crop Insurance Proceeds	0.10	0	0.02
Other Revenue*	0.10	0.01	0.05
Total Operating Cost	1.06	0.35	0.57
Cash Operating Expense	0.72	0.21	0.38
Depreciation	0.29	0.02	0.07
Non-Cash Costs**	0.18	-0.05	0.03
Interest Expense	0.14	0.01	0.03
Owner Labor & Management	0.15	0.01	0.07
Net Income	0.43	-0.40	0.22
Unit Cost of Production***	1.01	0.26	0.45

* Other revenue includes cooperative distributions, interest income, hedging income, etc.

** Includes only accrual adjustments

*** Adjusted for non-primary product revenue

Note: No yield observations were deleted from the sample.

Table 7. Income Measures - Irrigated Cotton Leased Observations 1996

\$/Acre			
	High	Low	Avg
Gross Accrual Revenue	692.28	156.30	425.91
Primary Product Sales	627.87	93.11	359.80
Government Payments	61.09	0	26.77
Crop Insurance Proceeds	53.43	0	3.56
Other Revenue*	327.29	0	35.78
Total Operating Cost	453.13	152.30	308.91
Cash Operating Expense	351.58	116.33	206.95
Depreciation	157.77	6.60	41.50
Non-Cash Costs**	26.82	-62.04	- .65
Interest Expense	29.60	2.22	11.42
Owner Labor & Management	107.83	0	49.69
Net Income	284.70	-88.59	117.00
\$/Pound			
	High	Low	Avg
Gross Accrual Revenue	0.96	0.66	0.79
Primary Product Sales	0.80	0.18	0.67
Government Payments	0.46	0	0.05
Crop Insurance Proceeds	0.09	0	0.01
Other Revenue*	0.62	0	0.07
Total Operating Cost	1.07	0.31	0.57
Cash Operating Expense	0.78	0.07	0.38
Depreciation	0.24	0.02	0.08
Non-Cash Costs**	0.09	-0.07	0
Interest Expense	0.08	0	0.02
Owner Labor & Management	0.21	0	0.09
Net Income	0.47	-0.24	0.22
Unit Cost of Production***	0.84	0.21	0.44

* Other revenue includes cooperative distributions, interest income, hedging income, etc.

** Includes only accrual adjustments

*** Adjusted for non-primary product revenue

Table 8. Balance Sheet and Performance Measures - Dryland Cotton Leased Observations 1995

Cost Basis (\$/Acre)			
	High	Low	Average
Total Investment	522	52	249
Current Assets	359	-16	103
Machinery/Equipment	165	7	78
Other Non-current Assets	313	0	68
Total Liabilities	363	0	127
Current Liabilities	291	0	82
Non-current Liabilities	180	0	45
Total Owner Equity	469	-253	122
Equity/Asset			49.00%
Debt/Equity Ratio			104.10%
Return on Assets			-1.68%
Return on Equity			-8.79%
Market Basis (\$/Acre)			
	High	Low	Average
Total Investment	646	52	280
Current Assets	359	-16	110
Machinery/Equipment	330	48	104
Other Non-current Assets	313	0	66
Total Liabilities	396	0	134
Current Liabilities	291	0	82
Non-current Liabilities	212	0	52
Total Owner Equity	469	-253	146
Equity/Asset			52.14%
Debt/Equity Ratio			91.78%
Return on Assets			-1.50%
Return on Equity			-7.34%

Note: All ratios are based on average balance sheet values.

Table 9. Balance Sheet and Performance Measures - Irrigated Cotton Leased Observations 1995

	Cost Basis (\$/Acre)		
	High	Low	Average
Total Investment	772	20	401
Current Assets	462	4	194
Machinery/Equipment	352	9	117
Other Non-current Assets	337	0	90
Total Liabilities	287	8	160
Current Liabilities	267	1	77
Non-current Liabilities	249	0	83
Total Owner Equity	696	-604	241
Equity/Asset			60.10%
Debt/Equity Ratio			66.39%
Return on Assets			8.77%
Return on Equity			9.44%

	Market Basis (\$/Acre)		
	High	Low	Average
Total Investment	778	20	443
Current Assets	462	4	198
Machinery/Equipment	445	9	155
Other Non-current Assets	371	0	90
Total Liabilities	329	8	173
Current Liabilities	267	1	78
Non-current Liabilities	258	0	95
Total Owner Equity	696	-611	270
Equity/Asset			60.95%
Debt/Equity Ratio			64.07%
Return on Assets			7.94%
Return on Equity			8.43%

Note: All ratios are based on average balance sheet values.

Table 10. Balance Sheet and Performance Measures - Dryland Cotton Leased Observations 1996 Cost Basis

	(\$/Acre)		
	High	Low	Average
Total Investment	836	93	322
Current Assets	434	18	171
Machinery/Equipment	123	21	83
Other Non-current Assets	594	0	68
Total Liabilities	268	20	110
Current Liabilities	221	6	67
Non-current Liabilities	180	9	43
Total Owner Equity	584	3	212
Equity/Asset			65.84%
Debt/Equity Ratio			51.89%
Return on Assets			29.30%
Return on Equity			39.42%

	Market Basis (\$/Pound)		
	High	Low	Average
Total Investment	914	142	349
Current Assets	434	18	171
Machinery/Equipment	204	41	110
Other Non-current Assets	615	0	68
Total Liabilities	296	-2	118
Current Liabilities	215	6	65
Non-current Liabilities	200	-14	53
Total Owner Equity	645	37	231
Equity/Asset			66.19%
Debt/Equity Ratio			51.08%
Return on Assets			27.04%
Return on Equity			36.18%

Note: All ratios are based on average balance sheet values.

Table 11. Balance Sheet and Performance Measures - Irrigated Cotton Leased Observations 1996

Cost Basis (\$/Acre)			
	High	Low	Average
Total Investment	693	92	366
Current Assets	416	-3	203
Machinery/Equipment	360	21	102
Other Non-current Assets	218	0	61
Total Liabilities	277	39	106
Current Liabilities	221	6	58
Non-current Liabilities	167	20	48
Total Owner Equity	545	0	260
Equity/Asset			71.04%
Debt/Equity Ratio			40.77%
Return on Assets			35.09%
Return on Equity			45.00%
Market Basis (A/Acre)			
	High	Low	Average
Total Investment	801	73	402
Current Assets	416	-3	206
Machinery/Equipment	277	40	136
Other Non-current Assets	218	0	60
Total Liabilities	306	23	119
Current Liabilities	217	6	57
Non-current Liabilities	135	-1	62
Total Owner Equity	574	15	283
Equity/Asset			70.40%
Debt/Equity Ratio			42.05%
Return on Assets			31.95%
Return on Equity			41.34%

Note: All ratios are based on average balance sheet values.