

**DAIRY BUSINESS
ANALYSIS PROGRAM**

1997

**REPORT
DAIRY FARM EXA**

University of Florida
Dairy Extension Service

1997 Dairy Business Analysis Project

The Dairy Business Analysis Project (DBAP) is a service of the University of Florida's Cooperative Extension Service and the Department of Dairy and Poultry Sciences. To date, 45 dairies in Florida, Georgia, and Alabama are participating in the project. The project is made stronger with increased dairy numbers and we thank you for your participation.

What follows is a detailed analysis of your dairy business. We hope this report helps you understand the performance of your business in comparison to others participating in DBAP. Several methods of analysis are provided to help you improve the business in the following business areas:

- DuPont Profitability Expansion. This analysis tool diagnoses which components of your business are driving your profitability level.
- Benchmarks. Performance factors and expenses are benchmarked to other DBAP dairies to identify the strengths and challenges of your business.
- Operating activities. This section highlights the areas of your business that contributed to operating efficiency. The areas of purchased feed, labor, crop, livestock, machinery and equipment, and other expenses are investigated in detail along with physical performance measures.
- Financing activities. A comparison and analysis of external financing is made. This section also tracks the financing your dairy has used and payments made on loans during the year.
- Investing activities. A detailed summary and comparison of investment performance and activity made by your dairy during the year.

This report was produced using a team effort. Your extension agent collected the data. It was then summarized, verified, and the report compiled in Gainesville. As always, the information from your dairy remains strictly confidential. If you have any questions about the report or DBAP itself, please feel free to contact the following people.

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Statement of Confidence

	Equity Imbalance	Cash Imbalance
Amount	0	0
Percent	0%	0%

The Dairy Business Analysis Project makes no statement about the accuracy of the financial statements contained in this report because data from dairies is accepted at face value. The above numbers provide some insight into the degree of confidence you can place into the measures of financial performance that are generated from these data. Two key areas are examined in the data to determine its accuracy.

Equity Imbalance:

If a dairy is profitable, the “profit” will show up somewhere on the balance sheet. It can be in the form of cash, an increase in assets, or in the form of reduced debt. Wherever the profit goes, it must be accounted for somewhere on the balance sheet and the ownership or “equity” in the business will increase. If everything is accounted for correctly, the difference between beginning and ending equity in the business will be equal to the profit. Some reasons for this not happening could include the following:

- Over/under estimation of profit. This can occur when accurate information about income is not included. Mistakes in data entry can also affect the imbalance.
- Inaccurate asset information. If asset levels are not correct or values dramatically change during the year, problems can occur when reconciling the differences.
- Incomplete liability information. If payment information is missing, or the balances are inaccurate, reconciliation will be difficult.

Cash Flow Imbalance:

The most active account on any dairy is cash. By paying particular attention to how cash moves into and out of the business, a determination of how much cash is “missing” from the financial statements can be done. One way is to add up all of the cash receipts and expenses and see if the cash account changed by this amount. If there is a discrepancy, some of the following may be occurring:

- Missing liability payments/borrowings. As a single use of cash, missing liability information is the biggest contributor to imbalances. Especially difficult to track is the borrowings and payments on an operating note or line of credit.
- Asset purchases/sales. Since they are not a part of the daily operation of the business, major transactions involving the sales or purchases of assets such as land or machinery are easy to overlook.
- Non-business uses. If cash is used for transactions not appearing on the “books”, the difference will not reconcile with beginning and ending balances.

SECTION #1

EXECUTIVE SUMMARY

Executive Summary

The average DBAP dairy had a slightly profitable year with net farm income from operations of \$0.28 per cwt. milk sold. The average total revenues were \$18.30 per cwt. milk sold and average total expenses per cwt. milk sold were \$18.02. This translates into an average operating profit margin of 0.02 or \$0.02 of net farm income for every dollar of revenue generated. This is down dramatically from the high profitability experienced in 1996.

Several investing activities dramatically affected the financial performance of this business in the past year. The addition of two freestall barns and subsequent increase in herd size appeared to increase expenses in the transition. Total pounds milk sold was up 16% from 1996, due both to a 13% increase in herd size and a 3% increase in pounds milk sold per cow. Labor efficiency improved somewhat to 42 cows per worker although was still well below the DBAP average of 53.

Net farm income from operations decreased substantially from 1996 to -\$145,427, driving the rate of return on assets to -1%. Total expenses of \$19.27 per cwt. milk sold were up 7% from 1996, mainly driven by a 4% increase in feed and crop expense to \$9.26 and a 13% increase in personnel expense to \$3.26. This was mostly driven by the transition to the new facility and moderate herd growth. However, expenses must be controlled if this dairy is to survive in the long term.

Total assets for year ended 1997 were \$4,700 per cow, slightly above the DBAP average of \$4,227. Of particular concern was that the majority of assets, 42%, were in real estate and buildings. This drove the asset turnover of 0.78 well below the DBAP average of 0.84 and was a sign of constrained capital efficiency. This was partially due to the fact that this is a young dairy with relatively new and undepreciated investments. However, capital efficiency might constrain profitability if not improved.

Total liabilities for year ended 1997 were \$1,273 per cow, below the DBAP average of \$1,487. Of concern, however, was the \$256,000 net increase in operating notes and \$50,285 increase in accounts payable. In addition to this was a \$320,806 increase in term notes, together driving a \$627,091 increase in liabilities. A large increase in debt coupled with an operating loss is not a combination that is favorable to farm survivability. Be wary of increases in accounts payable and operating notes.

Overall, this dairy has substantial challenges to survival. Personnel and feed expenses severely constrained overall profitability. This dairy must find a way to control expenses and improve the efficiency of production otherwise further increases in liabilities will drive this dairy to insolvency.

Critical Success Factor Report

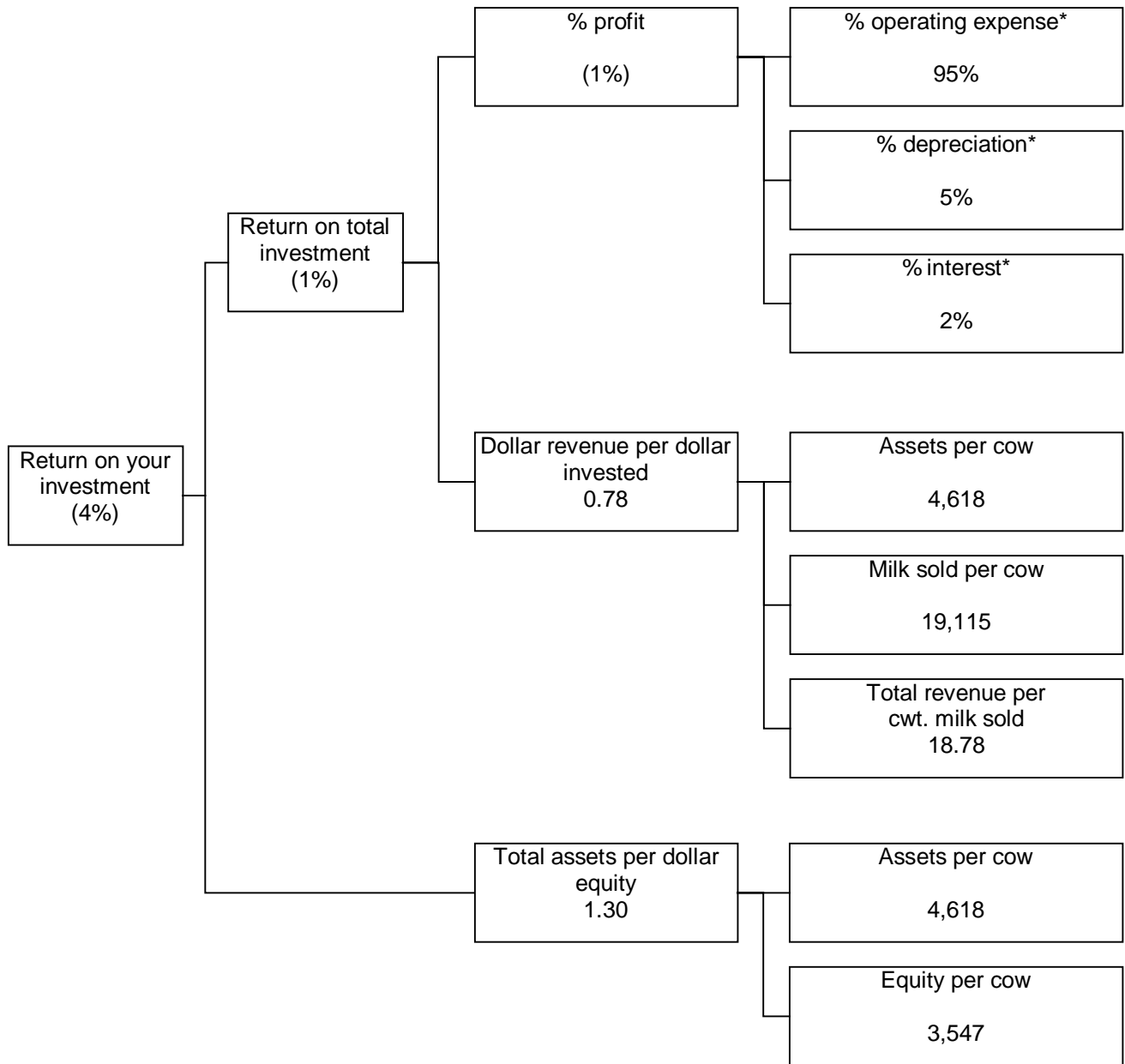
Selected Factors	1996	1997
Business Size		
Average number of cows	1,380	1,553
Average number of heifers	994	1,162
Milk sold, pounds	25,610,250	29,685,191
Full time worker equivalents	35	37
Acres of pasture and tillable land	500	500
Production Rates		
Milk sold per cow, pounds	18,558	19,115
Dry matter harvested per acre, tons	0.00	0.00
Labor Efficiency		
Cows per worker	40	42
Milk sold per worker, pounds	742,326	802,302
Cost Control		
Feed and crop expenses per cwt.	\$8.92	\$9.26
Personnel expense per cwt.	\$2.89	\$3.26
Expensed livestock purchases per cwt.	\$0.14	\$0.91
Livestock depreciation per cwt.	---	\$0.00
Interest costs per cwt.	\$0.40	\$0.45
Total costs per cwt.	\$18.05	\$19.27
Capital Efficiency (yearly average)		
Assets per cow	\$4,845	\$4,618
Asset turnover ratio	0.77	0.78
Profitability		
Net farm income from operations	\$550,520	(\$145,427)
Rate of return on assets	0.09	(0.01)
Rate of return on equity	0.09	(0.04)
Financial Summary		
Debt to equity ratio	0.25	0.37
Debt to asset ratio	0.20	0.27
Liabilities per cow	971	1,071

Note: Level 2

SECTION #2

IMPROVING BUSINESS PERFORMANCE

DuPont Profitability Expansion



*Percent of total revenues

Interpreting the DuPont profitability expansion

The DuPont profitability expansion, shown on page 5, is a useful model for understanding factors affecting the financial performance of your business. Two profitability measures serve as a base for the DuPont model, the return on your investment (equity) and the return on total investment (assets). The branches of the model spread out into other factors as shown in the diagram. The expansion shows which areas of the business contributed to the profitability level of your business. What follows are some details to help interpret the diagram.

Return on your investment. Also known as the rate of return on equity, this was computed as net farm income from operations minus a \$50,000 charge for management, divided by average total equity for the year. This measures how efficiently profits were generated from the assets controlled by the owner(s) of the business. The return on total investment and total assets per dollar equity affect this profitability measure.

Total assets per dollar equity. This is also known as leverage. Leverage is a measure of the portion of assets that are claimed by lenders outside of the business. High values for this number indicate that debt is high in comparison to the equity in the business. A value of one means that every dollar of assets is in the form of equity.

Assets per cow. Computed as the average between the beginning and the ending of the year, this measures the capitalization level of the business adjusted for herd size.

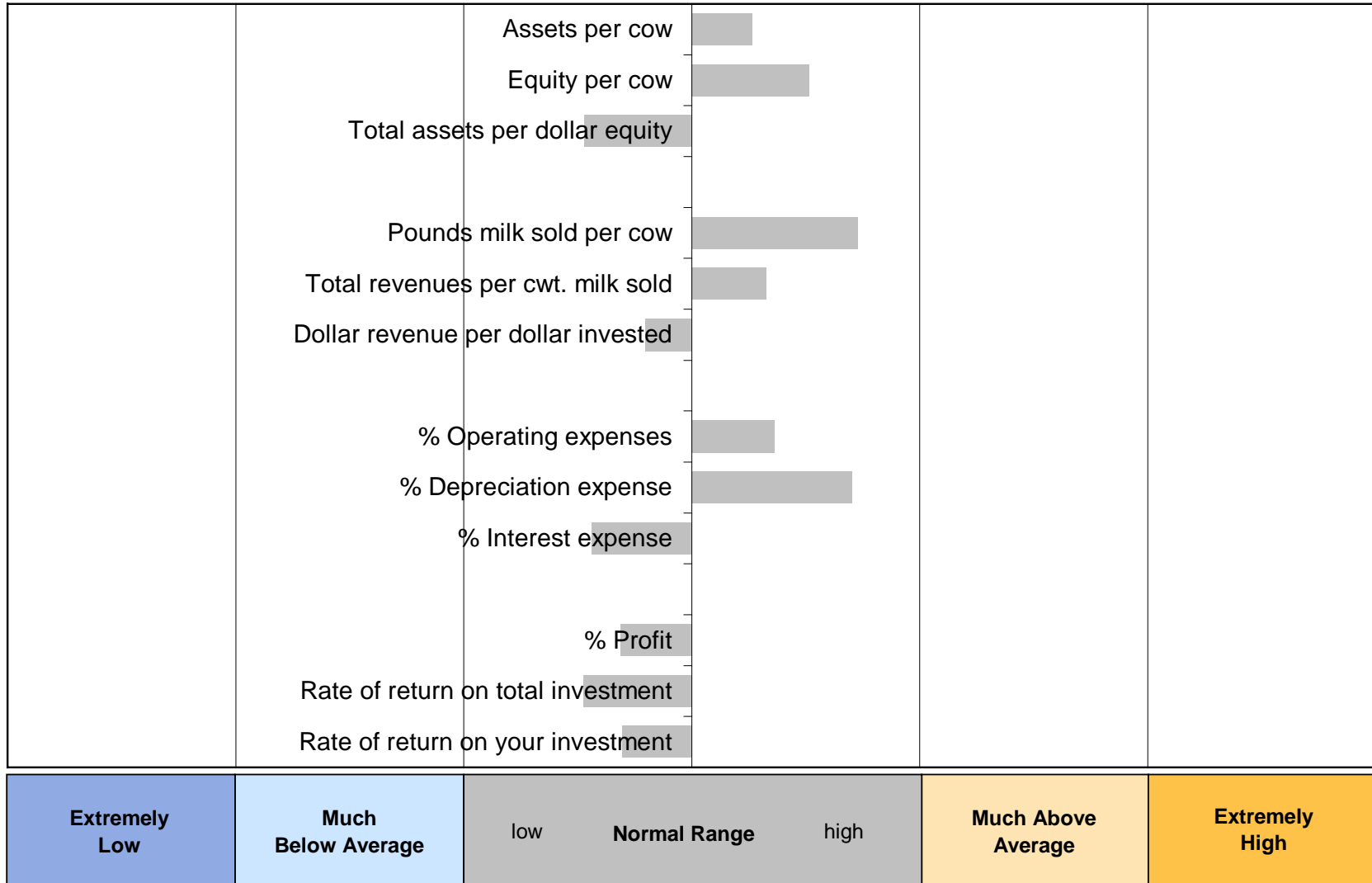
Equity per cow. This was also computed as the average between the beginning and ending of the year and measures the equity level of the business adjusted for herd size.

Return on total investment. This measures the efficiency at which profits were generated from the total investment of the business. Also known as the rate of return on assets, it was computed as net farm income from operations, plus interest, minus a \$50,000 charge for management, with the remainder divided by average total assets. Return on total investment is affected by the % profit and the dollar revenue per dollar invested.

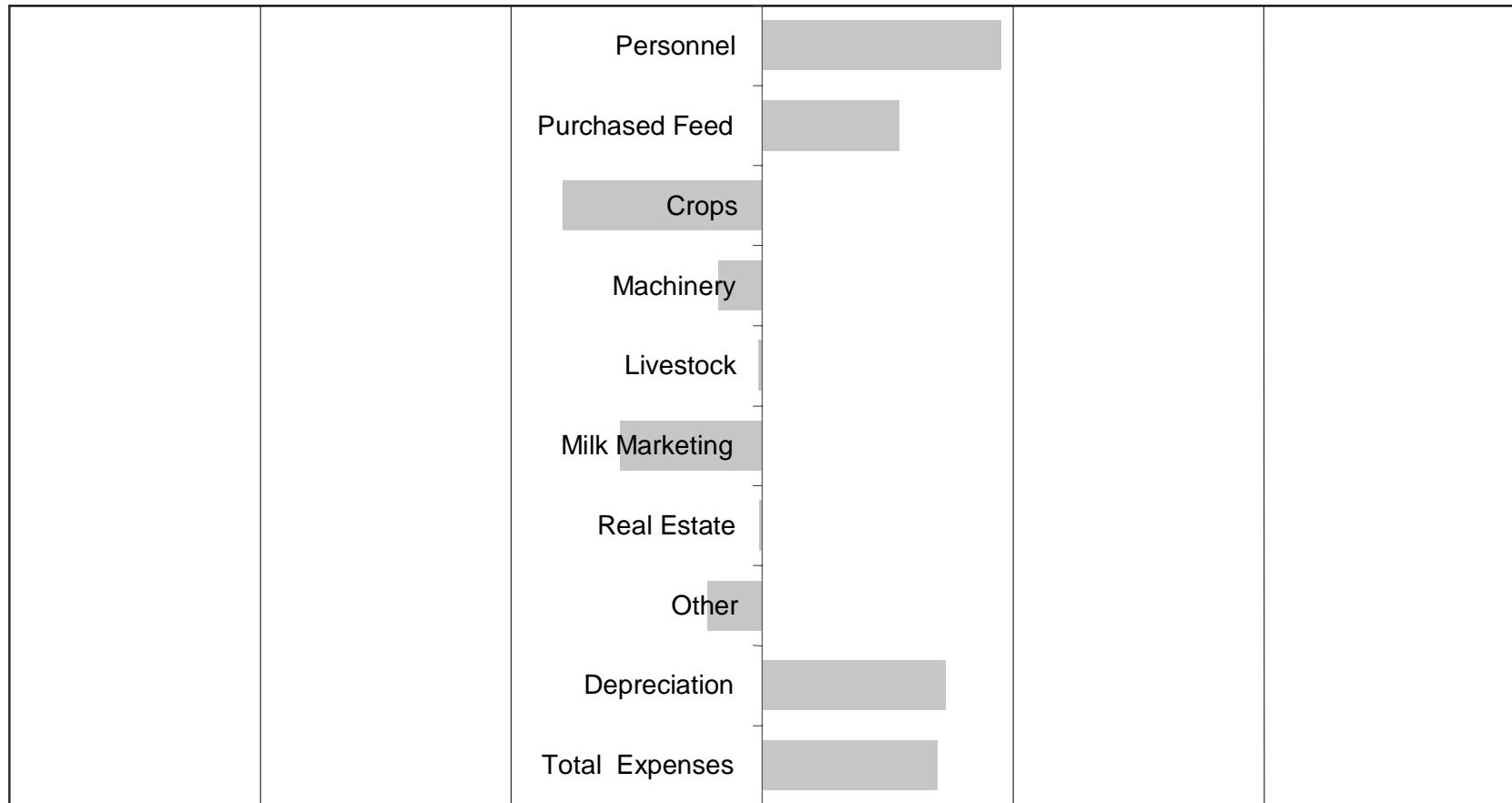
% profit. Also known as the profit margin, this measured how much profit was generated from each dollar of revenue. This was computed as net farm income from operations, plus interest, minus a \$50,000 charge for management, with the remainder divided by total revenues. This is a good measure of the operating efficiency of the business. The % operating expense, % depreciation, and % interest measure what portion of every dollar of total revenues these expenses were for the year.

Dollar revenue per dollar invested. This ratio measures the efficiency of the assets at generating revenues. Formally known as the asset turnover ratio, this was computed as total revenues divided by the average total assets for the year. This measure is affected by several factors. Assets per cow measures the capitalization level of the business adjusted by herd size. Milk sold per cow measures the production level of the business adjusted for herd size. Total revenue per cwt. milk sold describes the revenue level of the business adjusted for the volume of milk produced.

Your performance factors benchmarked to other DBAP dairies.



Your expenses benchmarked to other DBAP dairies.



Exceptional	Very Good	low Normal Range high	Problem	Severe Problem
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Improving Business Performance

Purchased Feed Expense

Purchased Feed

Line item expenses	Your dairy		All dairies	
	Total	\$/cwt.	Top 25%*	Average
Grain and concentrate	1,797,198	6.05	6.90	6.57
Forage	950,931	3.20	0.53	0.42
Complete ration	0	0.00	0.96	1.34
Other feed	0	0.00	0.01	0.03
Total feed	2,748,129	9.26	8.40	8.37

Feed performance

Factors	Your dairy	Top 25%*	All dairies
Pounds milk sold per cow	19,115	17,053	17,014
Purchased feed expense per cow	1,770	1,433	1,426
Purchased feed expense % of total revenues	49	43	46

Feed adjustments

Factors	Your dairy	Top 25%*	All dairies
Total purchased feed expense per cwt.	9.26	8.40	8.37
Plus: crop expense per cwt.	0.00	0.55	0.33
Less: crop revenues	0.00	0.90	0.17
Total adjusted feed expense	9.26	8.04	8.53

Analysis

Total adjusted feed expense of \$9.26 per cwt. milk sold was 9% above the DBAP average of \$8.53. While milk sold per cow of 19,115 pounds was 12% above the DBAP average of 17,014, purchased feed expense of \$1,770 per cow was 24% above the DBAP average of \$1,426. This was driven by extremely high forage expense of \$3.20 per cwt. milk sold.

Recommendations/Actions

Look for ways to increase the efficiency of rations and improve feed efficiency. This is the largest problem on the dairy and severely constrained profitability.

*Top 25% based on net farm income from operations per cwt. milk sold.

Labor Expense

Labor

Line item expenses	Your dairy		All dairies	
	Total	\$/cwt.	Top 25%*	Average
Salaries	854,934	2.88	2.14	2.11
Insurance, etc.	112,804	0.38	0.19	0.29
Other	0	0.00	0.01	0.05
Total	967,738	3.26	2.34	2.45

Labor performance

Factors	Your dairy	Top 25%*	All dairies
Milk sold per worker (lbs.)	802,302	950,722	885,200
Cows per worker	42	56	53

Analysis

Labor expenses of \$3.26 per cwt. milk sold were well above the DBAP average of \$2.45 and among the highest of all dairies. This was driven by below average milk sold per cow of 802,302 pounds and 42 cows per worker.

*Top 25% based on net farm income from operations per cwt. milk sold.

Crop Expenses

Crop

Line item expenses	Your dairy		All dairies	
	Total	\$/cwt.	Top 25%*	Average
Fertilizer	0	0.00	0.38	0.25
Seeds	0	0.00	0.10	0.05
Spray	0	0.00	0.07	0.03
Total	0	0.00	0.55	0.33

Crop performance

Factors	Your dairy	Top 25%*	All dairies
Tillable acres per cow	0.25	0.53	0.47
Dry matter harvested per acre (tons)	0.00	3.42	4.82
Crop expense per ton dry matter harvested	0.00	35.78	92.29
Crop expense per tillable acre	0.00	208.96	92.20

Analysis

*Top 25% based on net farm income from operations per cwt. milk sold.

Livestock

Livestock

Line item expenses	Your dairy		All dairies	
	Total	\$/cwt.	Top 25%*	Average
Expensed replacements	271,425	0.91	1.08	1.18
Breeding	50,115	0.17	0.09	0.10
Vet & drugs	133,333	0.45	0.25	0.30
Milking supplies	131,708	0.44	0.47	0.55
Cattle lease/rent	0	0.00	0.00	0.05
Other	131,145	0.44	0.23	0.22
Total	717,726	2.42	2.12	2.41

Livestock performance

Factors	Your dairy	Top 25%*	All dairies
Cull rate	0.41	0.41	0.41
Livestock expense as % of total revenues	13	11	13
Purchased replacement expense % of total revenues	5	6	6
Veterinary expense per cow	86	42	53
Breeding expense per cow	32	14	19

Replacement expense

Factors	Your dairy	Top 25%*	All dairies
Expensed livestock purchases per cwt.	0.91	1.08	1.18
Plus: livestock depreciation per cwt.	0.00	0.08	0.04
Plus: loss on sale of livestock per cwt.	0.00	-0.02	0.01
Total adjusted replacement expense	0.91	1.14	1.22

Analysis

There are several areas of concern in this expense area. Since this dairy raises a majority of the replacements, Total adjusted replacement expense of \$0.91 per cwt. milk sold was too high. This was driven by a cull rate of 41% and overall increase in herd size. Also above average was vet and drug expense line item on both a per cwt. and per cow basis.

Recommendations/Actions

Work to find the reasons for 41% cull rate.

Machinery and Equipment

Machinery

Line item expenses	Your dairy		All dairies	
	Total	\$/cwt.	Top 25%*	Average
Rent	0	0.00	0.17	0.22
Repairs	127,646	0.43	0.48	0.46
Fuel	94,993	0.32	0.18	0.16
Total	222,639	0.75	0.83	0.83

Analysis

Overall, it appears this expense area was under control. Fuel expense of \$0.32 per cwt. milk sold was above the DBAP average of \$0.16 and may represent one-time activities involved with building construction.

Other (milk marketing, real estate, other)

Other

Line item expenses	Your dairy		All dairies	
	Total	\$/cwt.	Top 25%*	Average
Hauling	192,954	0.65	0.71	0.76
Coop dues	29,685	0.10	0.12	0.15
Advertising/Marketing	44,528	0.15	0.13	0.15
CCC	0	0.00	0.00	0.00
Real estate repairs	103,898	0.35	0.26	0.22
Taxes	44,378	0.15	0.08	0.12
Rent	0	0.00	0.22	0.16
Insurance	38,445	0.13	0.18	0.17
Utilities	112,804	0.38	0.35	0.34
Interest	133,440	0.45	0.66	0.68
Miscellaneous	44,528	0.15	0.13	0.14
Other	38,591	0.13	-0.08	0.06
Total	783,251	2.64	2.76	2.95

Analysis

Overall, this expense area appears to be under control. A possible area of concern includes interest expense of \$0.45 per cwt. milk sold, although below the DBAP average of \$0.68, was a substantial dairy expense. Real estate repairs of \$0.35 per cwt. milk sold was above the DBAP average of \$0.22 and may be due to one-time improvements associated with the new facilities.

*Top 25% based on net farm income from operations per cwt. milk sold.

Financing

Liability structure

Liabilities	Your dairy		All dairies -per cow	
	Total	Per cow	Top 25%*	Average
Accounts payable	161,635	104	13	106
Operating notes	335,000	216	232	162
Short Term notes	0	0	0	0
Term notes	1,480,183	953	1,085	1,219
Total	1,976,818	1,273	1,331	1,487
Borrowings				
Operating notes	335,000	216	145	192
Short term notes	0	0	0	0
Term notes	450,000	290	132	165
Total	785,000	505	277	357
Payments				
Operating notes	79,000	51	172	189
Short term notes	0	0	0	0
Term notes	129,194	83	155	153
Total	208,194	134	327	342
Change				
Accounts payable	50,285	32	-45	40
Operating notes	256,000	165	-27	3
Short term notes	0	0	0	0
Term notes	320,806	207	-23	12
Net change	627,091	404	-95	55

Solvency

Ratios	Your dairy	Top 25%*	All dairies
Debt to asset	0.27	0.34	0.37
Equity to asset	0.73	0.66	0.63
Debt to equity	0.37	0.55	0.56

Efficiency

Ratios	Your dairy	Top 25%*	All dairies
Interest expense ratio	0.02	0.03	0.03
Times interest earned ratio	-1.09	10.12	3.11

*Top 25% based on net farm income from operations per cwt. milk sold.

Analysis

Total liabilities for year ended 1997 were \$1,273 per cow, below the DBAP average of \$1,487. However, above average financing activities during 1997 dramatically affected the debt structure of this dairy. Accounts payable, operating notes, and term notes all experienced net increases, driving total liabilities up by a total of \$627,091. Of particular concern were the large increases in accounts payable and operating notes, which were direct results of the 1997 operating loss and will constrain the future cashflow ability of this business.

Recommendations/Actions

Improve the operating efficiency of the business so that further increases in debt are not necessary. Debts can only be paid off with profits.

Investing

Capitalization

Factors	Your dairy	Top 25%*	All dairies
Assets per cow	4,758	3,991	4,227
Percent assets in livestock	34	41	38
Percent assets in real estate/buildings	42	26	34
Percent assets in machinery & equipment	13	15	15
Asset depreciation rate	4%	3%	3%
Net asset appreciation rate	0%	1%	1%

Investments

	Your dairy		All dairies	
	Total	Per cow	Top 25%*	Average
Capital Purchases				
Livestock	0	0	15	8
Machinery and equipment	0	0	130	129
Real estate and buildings	600,000	386	133	61
Total	600,000	386	278	199
Capital Sales				
Livestock	0	0	3	4
Machinery and equipment	0	0	6	18
Real estate and buildings	0	0	101	26
Total	0	0	110	49
Change				
Livestock	0	0	12	4
Machinery and equipment	0	0	123	111
Real estate and buildings	600,000	386	33	33
Net change	600,000	386	168	149

*Top 25% based on net farm income from operations per cwt. milk sold.

Investment performance

Ratio	Your dairy	Top 25%*	All dairies
Asset turnover ratio	0.78	0.94	0.84
Depreciation expense ratio	0.05	0.03	0.03
NFI from operations ratio	-0.03	0.11	0.01

Profitability

Ratio	Your dairy	Top 25%*	All dairies
Rate of return on assets	-1%	9%	2%
Rate of return on equity	-4%	11%	0%
Operating profit margin	-1%	11%	2%

Analysis

Total assets for year ended 1997 were \$4,700 per cow, above the DBAP average of \$4,227. Of particular concern was the 34% of assets in livestock, below the DBAP average of 38% and well below the 41% of the Top 25% group. This capital structure drove the asset turnover ratio to 0.78, well below the DBAP average of 0.84 and may be a sign of 'lazy' assets in the business.

The above average depreciation expense ratio of 5% may also be a potential area of concern. However, this may reflect the relatively young age of the business.

*Top 25% based on net farm income from operations per cwt. milk sold.

Revenues

Categories	Your dairy			All dairies	
	Total	Per cow	Per cwt.	Top 25%*	Average
Milk sales	5,128,334	3,302	17.28	17.17	16.87
Cow sales	272,426	175	0.92	1.01	0.79
Calf and heifer sales	150,800	97	0.51	-0.02	0.11
Other livestock	-500	0	0.00	0.18	0.08
Crops	0	0	0.00	0.90	0.17
Government receipts	0	0	0.00	0.04	0.03
Custom work	0	0	0.00	0.16	0.04
Gas tax refund	0	0	0.00	0.00	0.00
Other	22,829	15	0.08	0.33	0.21
Total	5,573,889	3,589	18.78	19.77	18.31

*Top 25% based on net farm income from operations per cwt. milk sold.

Expenses

	Your dairy			All dairies	
	Totals	Per Cow	Per Cwt.	Top 25%*	Average
Personnel					
Salaries/wages	\$854,934	\$551	\$2.88	\$2.14	\$2.11
Other payroll cost	\$112,804	\$73	\$0.38	\$0.19	\$0.29
Other	\$0	\$0	\$0.00	\$0.01	\$0.05
Total Personnel	\$967,738	\$623	\$3.26	\$2.34	\$2.45
Purchased Feed					
Grain & concentrate	\$1,797,198	\$1,157	\$6.05	\$6.90	\$6.57
Forage	\$950,931	\$612	\$3.20	\$0.53	\$0.42
Complete ration	\$0	\$0	\$0.00	\$0.96	\$1.34
Other feed	\$0	\$0	\$0.00	\$0.01	\$0.03
Total Purchased Feed	\$2,748,129	\$1,770	\$9.26	\$8.40	\$8.37
Crops					
Fertilizer & lime	\$0	\$0	\$0.00	\$0.38	\$0.25
Seeds & plants	\$0	\$0	\$0.00	\$0.10	\$0.05
Spray & other expense	\$0	\$0	\$0.00	\$0.07	\$0.03
Total Crops	\$0	\$0	\$0.00	\$0.55	\$0.33
Machinery					
Hire, rent, lease	\$0	\$0	\$0.00	\$0.17	\$0.22
Repairs & other expense	\$127,646	\$82	\$0.43	\$0.48	\$0.45
Fuel, oil, grease	\$94,993	\$61	\$0.32	\$0.18	\$0.19
Total Machinery	\$222,639	\$143	\$0.75	\$0.83	\$0.85
Livestock					
Expensed purchased livestock	\$271,425	\$175	\$0.91	\$1.08	\$1.18
Breeding	\$50,115	\$32	\$0.17	\$0.09	\$0.10
Vet & medicine	\$133,333	\$86	\$0.45	\$0.25	\$0.30
Bedding	\$0	\$0	\$0.00	\$0.00	\$0.03
Milking supplies	\$131,708	\$85	\$0.44	\$0.47	\$0.55
Cattle lease/rent	\$0	\$0	\$0.00	\$0.00	\$0.05
Other livestock expense	\$131,145	\$84	\$0.44	\$0.23	\$0.22
Total Livestock	\$717,726	\$462	\$2.42	\$2.13	\$2.44
Milk Marketing					
Hauling	\$192,954	\$124	\$0.65	\$0.71	\$0.75
Coop dues	\$29,685	\$19	\$0.10	\$0.12	\$0.15
Advertising, marketing	\$44,528	\$29	\$0.15	\$0.13	\$0.15
CCC/government assessments	\$0	\$0	\$0.00	\$0.00	\$0.00
Total Milk Marketing	\$267,167	\$172	\$0.90	\$0.96	\$1.06
Real Estate					
Land, building, fence repair	\$103,898	\$67	\$0.35	\$0.26	\$0.22
Taxes	\$44,378	\$29	\$0.15	\$0.08	\$0.12
Rent & lease	\$0	\$0	\$0.00	\$0.22	\$0.16
Total real estate	\$148,276	\$95	\$0.50	\$0.56	\$0.50
Other					
Insurance	\$38,445	\$25	\$0.13	\$0.18	\$0.17
Utilities (dairy share)	\$112,804	\$73	\$0.38	\$0.35	\$0.34
Interest	\$133,440	\$86	\$0.45	\$0.66	\$0.68
Miscellaneous	\$44,528	\$29	\$0.15	\$0.13	\$0.14
Other overhead	\$38,591	\$25	\$0.13	(\$0.08)	\$0.06
Total Other	\$367,808	\$237	\$1.24	\$1.24	\$1.39
Livestock depreciation	\$0	\$0	\$0.00	\$0.08	\$0.04
Machinery depreciation	\$144,403	\$93	\$0.49	\$0.36	\$0.41
Real Estate depreciation	\$135,430	\$87	\$0.46	\$0.20	\$0.18
Total Dairy Expenses	\$5,719,316	\$3,683	\$19.27	\$17.63	\$18.02

*Top 25% based on net farm income from operations per cwt. milk sold.

Action Steps, Goals and Strategies

1.

2.

3.

4.

5.

SECTION #3

**FINANCIAL
STATEMENTS
AND
RATIOS**

Dairy Business Analysis Project
Dairy Business Summary
1997

Balance Sheet

Dairy Assets	Jan 1	Dec 31	Dairy Liabilities & Net Worth	Jan 1	Dec 31
<u>Current</u>			<u>Current</u>		
Farm cash,	260,680		Accounts payable	111,350	161,635
checking & savings		46,965	Operating debt	79,000	335,000
Feed & supplies	48,850		Short term debt	_____	_____
Accounts receivable	408,943	39,112	Current portion-Notes Payable	129,194	250,492
Prepaid expenses	45,000	_____			
Total Current Assets	763,473	605,557	Total Current Liabilities	319,544	747,127
<u>Non Current</u>			<u>Non Current</u>		
Dairy cows:			Non Current Portion-		
owned	1,512,000	1,635,000	Notes Payable	1,030,193	1,229,691
leased	_____	_____	Financial leases-		
Heifers	692,300	843,100	cattle & machines	_____	_____
Bull and other livestock	10,000	9,500	Financial leases		
Machinery owned	1,074,385	929,982	-real estate & bldgs	_____	_____
leased	_____	_____	Total Non Current Liabilities	1,030,193	1,229,691
Farm Credit stock	15,200	15,200			
Other stocks & certificates	279,397	278,000			
Real Estate and buildings					
owned	2,608,588	3,073,158			
leased	_____	_____			
Total Non Current Assets	6,191,870	6,783,940	Total Liabilities	1,349,737	1,976,818
			Paid-in-capital		
			Net Worth	_____	_____
				5,605,606	5,412,679
			Total Liabilities &		
Total Assets	6,955,343	7,389,497	Owners' Equity	6,955,343	7,389,497

EXA

Dairy Business Analysis Project
Dairy Business Summary
1997

Income Statement			
Revenues			
Cash Milk Sales			5,017,797
Cow Revenues:	Cash Receipts	149,426	
	Change in Inventory	123,000	
	Gross Cow Revenues	<u>272,426</u>	272,426
Heifer and Calf Revenues:	Cash Receipts	-	
	Change in Inventory	150,800	
	Gross Heifer and Calf Revenues	<u>150,800</u>	150,800
Other Livestock Revenues:	Cash Receipts		
	Change in Inventory	(500)	
	Gross Livestock Revenues	<u>(500)</u>	(500)
Crop Revenues:	Cash Receipts	-	
	Change in Inventory	-	
	Gross Crop Revenues	<u>-</u>	-
Government Receipts			-
Custom Work			-
Gas Tax Refund			-
Other Farm Income			22,829
Change in Accounts Receivable			<u>110,537</u>
	Total Revenues		5,573,889
Expenses			
Cash Operating Expenses:	Personnel	967,738	
	Purchased Feed	2,609,481	
	Crops	-	
	Machinery	222,639	
	Livestock	749,964	
	Milk Marketing	267,167	
	Real Estate	148,276	
	Other	234,368	
	Total Cash Operating Expenses	<u>5,199,633</u>	5,199,633
Change in Inventory/Prepaid Expenses		56,125)	
Change in Accounts Payable		50,285	
Depreciation Expense		<u>279,833</u>	
	Total Operating Expenses		5,585,876
Cash Interest Paid			<u>133,440</u>
	Total Expenses		5,719,316
	Net Farm Income From Operations		(145,427)
Gain/Loss on Sale of Capital Assets			<u>-</u>
	Net Farm Income, Accrual Adjusted		\$ (145,427)

**Dairy Business Analysis Project
Dairy Business Summary
1997**

Standard Financial Ratio Analysis

Measure	Computation	Jan. 1	Dec. 31	Change
<u>Liquidity</u>				
Current Ratio	= Current Assets/Current Liabilities	.39	0.81	(1.58)
Working Capital	= Total Current Assets-Total Current Liabilities	443,929	(141,570)	(585,499)
<u>Solvency</u>				
Debt to Asset Ratio	= Total Liabilities/Total Assets	0.19	0.27	0.07
Equity to Asset Ratio	= Net Worth/Total Assets	0.81	0.73	(0.07)
Debt to Equity Ratio	= Total Liabilities/Net Worth	0.24	0.37	0.12
<u>Profitability</u>				
Rate of Return on Farm Assets (1)	= (NFIFO*+ Interest - Unpaid Mgt.)/Average Total Assets	_____	(0.01)	N/A
Rate of Return on Farm Equity (1)	= (NFIFO* - Unpaid Mgt.)/Average Equity	_____	(0.04)	N/A
Operating Profit Margin Ratio (1)	= (NFIFO* + Interest - Unpaid Mgt.)/Gross Revenues	_____	(0.01)	N/A
<u>Financial Efficiency</u>				
Asset Turnover Ratio	= Gross Revenues/Average Total Assets	_____	0.78	N/A
Operating Expense Ratio	= (Total Operating Expenses - Depreciation Expense)/Gross Revenues	N/A	0.95	N/A
Depreciation Expense Ratio	= Depreciation Expense/Gross Revenues	N/A	0.05	N/A
Interest Expense Ratio	= Total Farm Interest Expense/Gross Revenues	N/A	0.02	N/A
Net Farm Income From Operations Ratio	= NFIFO*/Gross Revenues	N/A	(0.03)	N/A

(1) An estimate of \$50,000 is used for the value of unpaid management.

*NFIFO = Net Farm Income From Operations. This figure is shown at the bottom of the previous page.

Dairy Business Analysis Project
Dairy Business Summary
1997

Profitability Analysis

Return to Operator, Family Labor/Unpaid Management, and equity capital:		
	Accrual Receipts	5,573,889
	- Accrual Expenses	5,719,316
	= Net Farm Income from Operations	<u>(145,427)</u>
Return to Operator and Management:		
	Net Farm Income from Operations	(145,427)
	- Unpaid Family Labor (1)	-
	- Interest on Average Equity Capital	385,640
	= Labor and Management Income	<u>(531,067)</u>
Return to Equity Capital:		
	Net Farm Income from Operations	(145,427)
	- Unpaid Family Labor	-
	- Value of Operator and Management (2)	47,500
	= Return to Equity Capital	<u>(192,927)</u>
	/Average Net Worth	5,509,143
	= Rate of Return on Equity Capital	(0.04)
Return to All Capital:		
	Return to Equity Capital	(192,927)
	+ Interest Paid	133,440
	= Return to All Capital	<u>(59,487)</u>
	/Average Total Assets	7,172,420
	= Rate of Return on all Capital	(0.01)

(1) Unpaid family labor is valued at \$2000 per full time month

(2) If no owner withdrawals are taken throughout the year, \$50,000 is used to estimate the value of operator and management.

EXA

**Dairy Business Analysis Project
Dairy Business Summary
1997**

Statement of Owner's Equity

Owners' Equity-Beginning of Period		5,605,606
Net Income/Loss	(145,427)	
Withdrawals for Unpaid Labor/Management	- 47,500	
Non Farm Income Contribution to Farm Business	+ -	
Other Capital Contributions/ Gifts/ Inheritances	+ -	
Other Capital Distributions/ Gifts Made	- -	
Additions and Reductions in Retained Capital	<u>(192,927)</u>	
Increase in Excess of Market Value over cost/basis of Farm Capital Assets (Appreciation)	+ -	
Increase in Excess of Market Value over cost/basis of paid-in-capital (Valuation)	+ -	
Total Change in Valuation Equity	<u>(192,927)</u>	
Owners' Equity, End of Period-Calculated		5,412,679
Ending Owners' Equity-Balance Sheet	- <u>5,412,679</u>	
Imbalance		-

**Dairy Business Analysis Project
Dairy Business Summary
1997**

Statement of Cash Flows

<u>Cash Flow From Operating Activities</u>		
Cash Farm Receipts	5,190,052	
Cash Farm Expenses	5,199,633	
Cash Paid for Interest	133,440	
	<hr/>	
Net Cash Farm Income		(143,021)
Net Cash-Income and Social Security Taxes		-
Net Cash-Other Operating Activities		-
		<hr/>
Net Cash Provided by Operating Activities		(143,021)
<u>Cash Flow From Investing Activities</u>		
Sale of Assets:		
Purchased Livestock	-	
Machinery and Equipment	-	
Real Estate and Buildings	-	
Total Asset Sales	<hr/>	-
Capital Purchases:		
Purchased Livestock	-	
Machinery and Equipment	-	
Real Estate and Buildings	600,000	
Total Asset Investments	<hr/>	600,000
Net Cash Provided by Investment Activities		(600,000)
<u>Cash Flow From Financing Activities</u>		
Money Borrowed-Operating Debt	335,000	
Money Borrowed-Short Term Debt	-	
Money Borrowed-Term Debt	450,000	
	<hr/>	
Cash Inflow From Financing		785,000
Principal Payments-Operating Debt	79,000	
Principal Payments-Short Term Debt	-	
Principal Payments-Term Debt	129,194	
	<hr/>	
Cash Outflow For Financing		208,194
Principal Paid on Capital Lease Obligations		-
Owner Withdrawals		47,500
Capital Distributions		-
Additional Paid-in-Capital		-
		<hr/>
Net Cash Provided by Financing Activities		529,306
Net Increase/Decrease in Cash/Cash Equivalents		(213,715)
Cash/Equivalents at Beginning of Year		260,680
Cash/Equivalents at Ending of Year		46,965
Imbalance		<hr/>
		-

Dairy Business Analysis Project
Dairy Business Summary
1997

Debt Analysis

Outstanding Debts	Jan. 1	Dec. 31	Change
Term Debt	1,159,387	1,480,183	320,796
Short Term			
Operating	79,000	335,000	256,000
Accounts Payable	111,350	161,635	50,285
Total	1,349,737	1,976,818	627,081
Per Cow	869	1,273	(404)
Debt Payments			
	Principal	Interest	
Term Debt	129,194	121,290	
Short Term	-	-	
Operating	79,000	12,150	
Total	208,194	133,440	
Per Cow	134	86	
Per cwt. Milk	0.70	0.45	
Percent of Total Receipts	4%	3%	
Cash Flow Coverage			
Cash Farm Receipts	5,190,052		
Cash Farm Expenditures	5,199,633		
Interest Paid	133,440		
(A) Cash Available for Debt Service	(143,021)		
(B) Dec. 31 Current Portion of Principal	585,492		
Cash Flow Coverage Ratio (A/B)	(0.2)		
Capital replacement and term debt repayment margin		Term Debt and Capital Lease Coverage Ratio	
Net Farm Income from Operations	(145,427)	Net Farm Income from Operations	(145,427)
+ Total non-farm income	-	+Total Non-farm Income	-
+ Depreciation Expense	279,833	+Depreciation Expense	279,833
- Income Tax	-	+Interest on Term Debt	121,290
- Withdrawals for Unpaid Management	47,500	-Income Tax	-
Capital replacement and term debt repayment capacity	86,906	-Withdrawals for unpaid labor/Mgt.	47,500
			208,196
- Term debt principal payments	129,194	/(Planned Payments on Term Debt	129,194
- lease principal payments	-	+Annual Payments on Capital Leases)	-
Capital replacement and term debt repayment margin	(42,288)	Ratio	1.61