Farm Financial Ratios and Benchmarks Calculations & Implications

Liquidity Analysis	Calculation	Good	Caution	Danger
Current Ratio	Total Current Assets ÷ Total Current Liabilities	> 1.50	0.80 - 1.50	< 0.80
Working Capital / Total Expenses *(expanding business)*	(Total Current Assets – Total Current Liabilities) ÷ Total Expenses	> 50%	15 - 50%	< 15%
Working Capital / Total Expenses *(stable business)*	(Total Current Assets – Total Current Liabilities) ÷ Total Expenses	> 25%	15 - 25%	< 15%
Solvency Analysis	**Calculation**	**Good**	**Caution**	**Danger**
Debt / Asset Ratio	Total Liabilities ÷ Total Assets	< 30%	30 - 70%	> 70%
Equity / Asset Ratio	Total Equity ÷ Total Assets	> 70%	30 - 70%	< 30%
Debt / Equity Ratio	Total Liabilities ÷ Total Equity	< 42%	42 - 230%	> 230%
Profitability Analysis	**Calculation**	**Good**	**Caution**	**Danger**
Rate of Return on Assets (ROA) *(mostly owned)*	(NFIFO* + Interest Expense – Operator Management Fee) ÷ Total Assets	> 8%	3 - 8%	< 3%
Rate of Return on Assets (ROA) *(mostly rented or leased)*	(NFIFO* + Interest Expense – Operator Management Fee) ÷ Total Assets	> 12%	3 - 12%	< 3%
Operating Profit Margin	(NFIFO* + Interest Expense – Operator Management Fee) ÷ Gross Revenue	> 25%	10 - 25%	< 10%
Financial Efficiency	**Calculation**	**Good**	**Caution**	**Danger**
Asset Turnover Ratio	Gross Revenue ÷ Total Assets	> 40%	20 - 40%	< 20%
Operating Expense / Revenue Ratio *(mostly owned)*	(Operating Expenses - Interest - Depreciation) ÷ Gross Revenue	< 65%	65 - 80%	> 80%
Operating Expense / Revenue Ratio *(mostly rented or leased)*	(Operating Expenses - Interest - Depreciation) ÷ Gross Revenue	< 75%	75 - 85%	> 85%
Net Farm Income From Operations Ratio	NFIFO* ÷ Gross Revenue	Look at trends; varies with cyclical nature of agricultural prices & income		
Repayment Analysis	**Calculation**	**Good**	**Caution**	**Danger**
Term Debt and Lease Coverage Ratio	[(NFIFO* + Gross Non Farm Revenue + Depreciation Expense + Interest on Term Debts and Capital Leases) – Income Tax Expense – Family Living Withdrawals)] ÷ Scheduled Annual Principal and Interest Payments on Term Debt and Capital Leases	> 150%	110 - 150%	< 110%
Term Debt/EBITDA	(Total Non-Current Liabilities + Current Portion of Term Debt) / (NFIFO + Interest Expense + Depreciation Expense)	< 3	3 - 7	> 7

DAIRY INDUSTRY BENCHMARKS		Good	Caution	Danger
Debt Per Cow	Total Farm Liabilities / (Lactating + Dry Cows)	≤ $5,000	$5,001 - 7,999	≥ $8,000
Investment Per Cow	Total Farm Assets / (Lactating + Dry Cows)	≤ $13,000	$13,001 - 16,999	≥ $17,000
Tillable Acres Per Cow	Total Tillable Acres / (Lactating + Dry Cows)	≥ 4	2 - 3.99	≤ 1.99
Machinery Investment Per Cow	Total Machinery & Equipment Value / (Lactating + Dry Cows)	≤ $2,500	$2,501 - 3,499	≥ $3,500
Lbs Milk Sold Per Cow	Lbs Shipped / (Lactating + Dry Cows)	≥ 24,000	18,001 - 23,999	≤ 18,000
Lbs Milk Sold Per FTE Worker	Lbs Shipped / FTE for all dairy-related labor	>1.5 million	1.0 - 1.5 million	<1.0 million
Gross Cash Income Per Cow	(Milk + Culls + Calves & Heifers + Patronage) / (Lactating + Dry Cows)	≥ $4,500	$3,001 - 4,499	≤ $3,000
Interest Cost Per Cow	Total Interest Expense / (Lactating + Dry Cows)	≤ $270	$269 - 349	≥ $350
Net Farm Cash Income Per Cow	(NFIFO + Depreciation) / (Lactating + Dry Cows)	≥ $600	$201 - 599	≤ $200
Cost of Producing CWT of Milk	(Total Dairy-Related Expenses + Interest + Depreciation) / CWT Shipped	≤ $17.49	$17.50 - 18.99	≥ $19.00

***NFIFO = Net Farm Income From Operations: (Total Revenues - Total Expenses, excluding gains or losses from disposal of farm capital assets).**

Financial benchmarks format developed by Dr. David Kohl, Virginia Tech. Industry benchmarks from Gary Sipiorski, Vita Plus Corporation.

Modified for Dairy Challenge, November 2019.