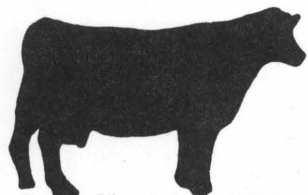


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OCT 27 1981

MEASURES FOR EVALUATING THE FINANCIAL POSITION OF A DAIRY BUSINESS

by



404-211

Reprinted September, 1981

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During recent years many dairymen have experienced substantial increases in their net worth and cash receipts. Much of this increase in wealth has been brought about through appreciation of fixed assets, especially real estate and machinery inventories. Because of inflation, replacement of these assets will require more credit and, therefore, greater cash available for debt service. With today's competitive money market, a dairyman must be more of a businessman than ever before. He must understand his financial position in order to satisfy lenders who make decisions which affect the dairyman's credit position. Also he must understand his financial position so that he can improve upon his weaknesses or liabilities. Now, let us discuss the factors taken into consideration when a dairyman's financial position is analyzed.

The most important consideration to lenders is repayment ability. A large net worth with a high percentage of equity will not secure a loan for a dairyman who does not generate enough cash income to repay the loan. Repayment ability is calculated as follows:

Determination of Repayment Ability

Total Business Cash Receipts (cash receipts, capital sales, non-farm income)	\$ _____
Minus: Business Cash Operating Expenses (without any interest or principal payments)	\$ - _____
Minus: Family Living Expenses	\$ - _____
Minus: Annual Interest and Principal Payments	\$ - _____
Repayment Ability: (Cash Available for New Investment and Unforeseen Circumstances)	\$ _____

As a general rule, the total debt payments (principal and interest) per year should not exceed 25% of the milk check.

Two variables influencing repayment ability deserve extra attention. Many factors affect the deduction for family living expenses. It is important that this figure be estimated accurately so that family funds are not allocated to debt repayment.

The treatment of non-farm income is also important. Careful attention to the source of the income is necessary. Loss of a non-farm job, or family problems can lead to great difficulty if the non-farm income is budgeted too heavily for repayment obligations. Also, remember that if the figures used in determining repayment ability reflect any unusual transactions (such as sale of cattle, machinery, land, or other properties), the results won't be applicable to future years and must be adjusted accordingly. Ideally, this repayment calculation should be based on the last three or four years to provide an accurate picture.

Now that we have a method of calculating debt repayment ability, we need to translate this into debt carrying (borrowing) capacity. The amount of debt that can be serviced with a given amount of money is dependent on the interest rate and the length of the repayment period (term).

$$\text{Borrowing capacity equals: } \frac{\text{Repayment ability}}{\text{Annual payment required per } \$1000} \times \$1000$$

Repayment required is calculated by using Table 1 to locate the annual repayment required per \$1000 of loan for the interest rate and term of your loans. To account for different loan rates and terms, the repayment required for each loan is multiplied by the percentage of the total debt represented by that loan. Contributions from the separate loans are then added together.

Table 1. Annual Payment Required Per \$1000 of Loan.

Terms of Loan (Years)	Interest Rate (Percent)							
	8	9	10	11	12	13	14	15
3	\$388	\$395	\$402	\$409	\$416	\$424	\$431	\$438
5	250	257	264	270	277	284	291	298
7	192	199	205	212	219	226	233	240
10	149	156	163	170	177	184	192	199
15	117	124	131	139	147	155	163	171
20	102	110	117	126	134	142	151	160
25	94	102	110	119	128	136	145	155
30	89	97	106	115	124	133	143	152
40	84	93	102	112	121	131	141	150

Example 1: Suppose a dairyman has a repayment ability of \$30,000 per year. He wants to buy a neighboring farm, but is not sure if he can repay a loan. To find out what he can repay with \$30,000 per year, he calculated his borrowing capacity with the payment required per \$1000 of loan from Table 1 (25-years at 12% interest). His borrowing capacity formula becomes:

$$\frac{\$30,000}{\$128} \times \$1000 = \$234,375$$

Now the dairyman can compare the price of the property to the principal he can afford to repay (\$234,375).

Example 2: A dairyman's repayment ability is \$40,000. A total of 60% will be borrowed on real estate at 10% interest for 25 years, and 40% will be borrowed on livestock at 12% interest for 7 years.

$$\text{Repayment required} = \left[\frac{\text{Real Estate}}{.60 \times \$110} \right] + \left[\frac{\text{Livestock}}{.40 \times \$219} \right] = \$154 \text{ per } \$1,000 \text{ loan.}$$

$$\text{Borrowing capacity} = \frac{\$40,000}{\$154} \times \$1,000 = \$259,740$$

Therefore, this dairyman can borrow \$155,844 on real estate and \$103,896 on livestock and maintain annual payments of \$40,000 for the first seven years.

Of course this amount of borrowing capacity is that which could be repaid by the available cash income, but is not necessarily the amount a lender will lend on an operation. The final determination of borrowing capacity must also include the equity situation and other factors.

Repayment ability is not the only measure which is used in evaluating an operation's financial position. The use of credit already extended and measures of efficient production practices are considered carefully by lenders before approval of additional loans.

Many calculations can be made from the information found in the budget (profit and loss statement) and the balance sheet (net worth statement). The calculation of financial ratios can describe a financial position quite fully and can also be used to measure the efficiency of the operation. Here is a list of ratios, an explanation of their calculation, and a description of what can be interpreted from each ratio.

Investment/Cow is calculated by dividing the total farm value (total assets) by the number of milking cows. The investment per cow is a measure of the efficiency of capital usage. Extremely high investments may indicate excessive overhead costs, while extremely low investments may mean that resources are of substandard quality. Typical investment per milking cow (milking & dry) in Virginia is \$4,000 to \$5,000.

Capital Turnover is calculated by dividing the total farm value (total assets) by the total cash receipts for the year. This ratio signifies the number of years required for receipts to equal the total investment. Shorter capital turnover generally yields greater annual profits and reduces "tied-up" capital. Typically, capital turnover should be two to three years for a Virginia dairy. By comparison, capital turnover on a beef operation is typically five to six years, while capital turnover for a fast-food restaurant may be only two weeks.

Percent Equity is calculated by dividing net worth by total farm assets. The percent equity represents that portion of the total investment which the farmer owns clear of any financial claims. A low percent equity is a risk to the lender and the farmer. If the percent equity is less than 50, the lender has greater risk because he and other lenders own more of

the business than does the dairyman. This would cause losses if the business were to fail (as in the case of a forced sale). The farmer's management flexibility may be greatly reduced from such a heavy debt commitment.** Interpretation of this figure must be modified to account for debt structure and management ability (especially for young farmers). Most lending institutions consider less than 40% equity to be rather risky. Equity of over 60% is considered by most lenders to be a strong financial benefit.

** Management flexibility may be lost under heavy debt situations because there may be no cash available for additional resources such as extra fertilizer or purchased grain which could enhance production. Another problem is the inability to refinance an operation which already carries a large debt commitment.

Return to Equity is calculated by dividing net profit by net worth. Net profit is receipts minus cash expenses (including interest) and depreciation. It represents the return to the owner's investment in the business. This measure is important to the farmer in that it can be compared to the potential returns from other investments (such as other farm enterprises, certificates of deposit, or stocks and bonds) to determine whether the farm enterprise is in fact as profitable an investment.

Financial Progress is an observation over time used to indicate how much progress has been made and how it was accomplished. Financial progress is measured by a change in net worth. If net worth has increased, the reason may be important. Has it been secured through good management, unexpected changes in the economic situation, appreciation of assets (inflation) OR by means of a non-farm condition, such as gifts, inheritance, marriage, etc.?

It is important when evaluating financial position that all these figures and ratios be observed simultaneously. An independently calculated measure may not accurately reflect the total financial position.

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Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, and September 30, 1977, in cooperation with the U. S. Department of Agriculture. W. P. Van Dresser, Dean, Extension Division, Cooperative Extension Service, Virginia Polytechnic Institute and State University, Blacksburg, Virginia 24061; M. C. Harding, Sr., Administrator, 1890 Extension Program, Virginia State University, Petersburg, Virginia 23803.