

Kansas Agricultural Experiment Station Research Reports

Volume 0

Issue 1 *Cattleman's Day* (1993-2014)

Article 581

1996

Financial performance measures for Kansas beef cow farms

Michael R. Langemeier

Follow this and additional works at: <https://newprairiepress.org/kaesrr>

 Part of the [Other Animal Sciences Commons](#)

Recommended Citation

Langemeier, Michael R. (1996) "Financial performance measures for Kansas beef cow farms," *Kansas Agricultural Experiment Station Research Reports*: Vol. 0: Iss. 1. <https://doi.org/10.4148/2378-5977.1984>

This report is brought to you for free and open access by New Prairie Press. It has been accepted for inclusion in Kansas Agricultural Experiment Station Research Reports by an authorized administrator of New Prairie Press. Copyright 1996 Kansas State University Agricultural Experiment Station and Cooperative Extension Service. Contents of this publication may be freely reproduced for educational purposes. All other rights reserved. Brand names appearing in this publication are for product identification purposes only. No endorsement is intended, nor is criticism implied of similar products not mentioned. K-State Research and Extension is an equal opportunity provider and employer.



Financial performance measures for Kansas beef cow farms

Abstract

Financial performance measures assist managers in making strategic plans and tracking progress in relationship to a farm's goals. Kansas Farm Management Association data were used to compute average financial performance measures by herd size for beef cow farms. Farms with over 200 cows derived a larger percent of their income from beef cow production, tended to be larger in terms of gross farm income and total assets, were more profitable, and had lower debt ratios. Differences in financial performance among beef cow farms suggest that comparisons should be made only with herds that are similar in size.

Keywords

Cattlemen's Day, 1996; Kansas Agricultural Experiment Station contribution; no. 96-334-S; Report of progress (Kansas State University. Agricultural Experiment Station and Cooperative Extension Service); 756; Beef; Profitability; Liquidity; Solvency; Financial efficiency; Cows

Creative Commons License



This work is licensed under a [Creative Commons Attribution 4.0 License](https://creativecommons.org/licenses/by/4.0/).

**FINANCIAL PERFORMANCE MEASURES
FOR KANSAS BEEF COW FARMS**

*M. R. Langemeier*¹

Summary

Financial performance measures assist managers in making strategic plans and tracking progress in relationship to a farm's goals. Kansas Farm Management Association data were used to compute average financial performance measures by herd size for beef cow farms. Farms with over 200 cows derived a larger percent of their income from beef cow production, tended to be larger in terms of gross farm income and total assets, were more profitable, and had lower debt ratios. Differences in financial performance among beef cow farms suggest that comparisons should be made only with herds that are similar in size.

(Key Words: Profitability, Liquidity, Solvency, Financial Efficiency, Cows.)

Introduction

Financial performance measures can be used to assess the profitability, liquidity, solvency, and financial efficiency of a business. These measures provide information about the financial position and health of a business. Financial performance measures typically are used as warning signals and to track progress towards specific goals.

The objective of this study was to provide benchmark performance measures by size of herd for beef cow farms in Kansas. This information can be used by beef cow producers and farm financial analysts for comparative purposes.

Experimental Procedures

Kansas Farm Management Association data from 1985 to 1994 were used in this study. Recommendations of the Farm Financial Standards Task Force were used to define profitability, liquidity, solvency, and financial efficiency measures. Specific definitions of each measure can be found in Cooperative Extension publication MF-2148, *Measuring Farm Financial Performance*, October 1995.

Profitability measures explain the efficiency with which a farm uses its resources to produce profits. Profitability measures used in this analysis included net farm income, return on assets, return on equity, and the profit margin ratio. Net farm income was calculated by subtracting cash operating expenses and depreciation from gross farm income. Return on assets represented the return to both debt and equity capital, and return on equity measured the residual return to equity capital. The profit margin ratio expressed profit as a percentage of gross farm income. Rate of return measures were adjusted for operator labor and management charges.

Liquidity measures were used as indicators of a farm's ability to meet financial obligations as they came due, without disrupting the normal operations. Liquidity measures used in this analysis included the current ratio (current assets divided by current liabilities) and working capital (current assets minus current liabilities).

A farm's ability to cover all debt obligations was examined using percent intermediate debt, percent long-term debt, the debt to asset ratio,

¹Department of Agricultural Economics.

and net worth. The debt to asset ratio is the most commonly used solvency measure. This ratio was calculated by dividing total debt by total assets.

Financial efficiency measures show the intensity with which a business uses its assets to generate revenue and the effectiveness of production, purchasing, pricing, and financing decisions. The asset turnover ratio, the operating expense ratio, the depreciation expense ratio, the interest expense ratio, and the net farm income ratio were used to analyze financial efficiency. The asset turnover ratio was calculated by dividing gross farm income by total assets. This measure shows how efficiently capital is being used in the business. The expense and net farm income ratios were calculated by dividing expense or net farm income by gross farm income.

Results and Discussion

Table 1 presents average farm financial measures by size of herd. Most of the herds in Kansas and surrounding states are smaller than 100 cows. Thus, it was not surprising to find a significant number of farms with less than 100 cows in the Kansas Farm Management Association. The larger farms tended to derive more of their income from the beef cow enterprise. The farms with smaller herds tended to be smaller, and more diversified.

On average, the farms with larger beef cow herds had higher gross farm incomes, net farm incomes, rates of return, and profit margin ratios. Because so much difference in profitability occurs between farms with different herd sizes, it is important to take herd size into account when making financial performance comparisons.

Farms with larger herds tended to have more working capital, but lower debt ratios. For example, intermediate debt averaged only 11% for farms with more than 200 cows, but was 30% for farms with less than 50 cows. Intermediate assets and debt would include breeding livestock. Lower debt ratios make it easier to adjust to declining asset values. Though not presented here, over this 10-year period, beef cow operations tended to have lower debt to asset ratios than crop, swine, and dairy farms.

On average, about 63% to 65% of gross farm income was used to cover operating expenses. Another 18% to 21% was used for interest and depreciation expenses. The remaining 15% to 17% represented net farm income or profit.

To assess a farm's financial progress, financial performance measures should be computed and compared with the farm's goals and industry averages. If a farm's performance is below the industry average, corrective action may be needed.

Table 1. Average Financial Measures by Herd Size for Kansas Beef Cow Farms, 1985-1994

| Measure | Number of Beef Cows | | | |
|---|---------------------|----------------|-----------------|------------------|
| | 1-50 Head | 51-100 Head | 101-200 Head | Over 200 Head |
| Number of farms | 380 | 263 | 176 | 57 |
| Percent of Income from Beef Cow Herd | 18% | 30% | 40% | 51% |
| <u>Profitability measures</u> | | | | |
| Gross farm income | \$130,245 | \$149,928 | \$208,571 | \$310,472 |
| Net farm income | \$25,355 | \$28,961 | \$38,007 | \$60,583 |
| Return on assets | 3.78% | 4.24% | 4.90% | 5.56% |
| Return on equity | 0.19% | 1.10% | 2.45% | 3.08% |
| Profit margin ratio | 3.09% | 8.04% | 11.81% | 14.66% |
| <u>Liquidity measures</u> | | | | |
| Current ratio | 1.65 | 1.61 | 1.52 | 1.83 |
| Working capital | \$54,680 | \$65,392 | \$81,401 | \$150,905 |
| <u>Solvency measures</u> | | | | |
| Percent intermediate debt | 30% | 23% | 17% | 11% |
| Percent long-term debt | 36% | 34% | 31% | 31% |
| Debt to asset ratio | 37% | 36% | 34% | 29% |
| Total assets | \$385,179 | \$483,198 | \$664,703 | \$1,115,980 |
| Net worth | \$254,878 | \$326,824 | \$447,757 | \$832,639 |
| <u>Financial efficiency measures</u> | | | | |
| Asset turnover ratio | 40% | 35% | 34% | 33% |
| Operating expense ratio | 63% | 63% | 64% | 65% |
| Depreciation expense ratio | 11% | 11% | 9% | 8% |
| Interest expense ratio | 10% | 11% | 10% | 10% |
| Net farm margin ratio | 15% | 16% | 17% | 17% |

Source: Kansas Farm Management Association.