

# DERIVED FARM FINANCIAL RATIOS FOR KANSAS FARMS

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Kansas State University  
Agricultural Experiment Station  
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## DERIVED FARM FINANCIAL RATIOS FOR KANSAS FARMS\*

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### ABSTRACT

Net farm income for agricultural producers enrolled in the Kansas Farm Management Association (KFMA) program during the period 1991 to 1996 ranged from a low of \$22,353 in 1995 to a high of \$61,915 in 1996. With this large variation in net farm income from year to year as well as among farm businesses, measurement values are needed to detect strengths and weaknesses in a farm business and to indicate financial progress over a period of years. Farm financial ratios provide one way to evaluate the condition of a farm business as a unit. Financial information from farms enrolled in the KFMA program for the period 1991 to 1996 was used to derive average farm financial ratios on state, regional, and farm type bases. On a statewide basis, the debt-to-asset and current ratios averaged 1.92 and 0.34, respectively. The rate of return on farm assets was 3.52%. The asset turnover ratio was 0.30. The operating expense ratio (a measure of financial efficiency) was 61.36% with an average net farm income of \$36,980. The farm financial ratios derived for the six regions were very similar to those obtained for the state. However, levels of the farm financial ratios did vary among the various farm types analyzed. The rate of return on farm assets was negative for cow herd and crop-cow herd farms. The debt-to-equity ratio for crop-beef backgrounding farms in the north central region was 1.54 indicating a debt level 54% greater than equity. An agricultural producer needs to compare several farm financial ratios against benchmark values to determine the strengths and weaknesses of his/her farm business.

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## INTRODUCTION

Net farm income for agricultural producers enrolled in the Kansas Farm Management Association (KFMA) program during the period 1991 to 1996 ranged from a low of \$22,353 in 1995 to a high of \$61,915 in 1996.<sup>1</sup> The rate of return to equity ranged from a negative 4.75% in 1991 to 2.78% in 1996--a total variation of 7.53%.<sup>2</sup> These values indicate the large fluctuations that occur in net income values for farm businesses from year to year. Variation also occurs among farm businesses each year. The medium net farm income in 1996 was \$42,325 compared to the average of \$61,915, with over 11% of the agricultural producers incurring a negative income.

With these large differences in net farm income from year to year and among farm businesses, measurement values are needed to detect strengths and weaknesses within a farm business as well as to indicate financial progress over a period of years. Farm financial ratios provide one way to evaluate the condition of a farm business as a unit.

Comparison of farm financial ratios of a farm business to ratios of other farm businesses of similar type and size may provide the information needed to detect strengths and weaknesses in the operational unit. Comparison of the ratios to established standards or benchmarks also would be helpful. Yet, the establishment of minimum or maximum values that all farm businesses should meet for various financial ratios is extremely difficult. The objective of this study was to develop a set of average farm financial ratios, on state, regional, and farm-type bases, using actual farm data available in Kansas for the period 1991 to 1996. This set of average farm financial ratios will serve as the first step in the derivation of standards or benchmarks.

## FINANCIAL RATIOS CONSIDERED<sup>3</sup>

A number of farm financial ratios have been determined to be useful indicators of financial progress and risk-bearing ability. The ratios considered in this study can be grouped into four categories:

### Liquidity

Solvency  
Profitability  
Financial Efficiency

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<sup>1</sup> Source: Larry N. Langemeier and Fredrick D. DeLano, The Annual Report, 1991-96, Department of Agricultural Economics, Kansas State University, Manhattan, Kansas.

<sup>2</sup> The rate of return to equity does not include the annual inflation (deflation) in land values and other capital assets.

<sup>3</sup> For additional information on farm financial ratios, see Farm Financial Standards Council, "Financial Guidelines for Agricultural Producers II", Revised December, 1997 and Larry N. Langemeier, Financial Ratios Used in Financial Management, MF-270, Kansas State University, Agricultural Experiment Station and Cooperative Extension Service, October, 1998.

### Liquidity Indicators

Liquidity measures the ability of a farm business to meet financial obligations as they come due in the ordinary course of business, without disrupting the normal operations of the business. These financial ratios and values that measure liquidity are calculated from balance sheet data<sup>4</sup>:

Current Ratio  
Working Capital

The Current Ratio indicates the extent to which current farm assets, if liquidated, would cover current farm liabilities. The higher the current ratio, the greater the liquidity. The ratio is computed as follows:

$$\text{Current Ratio} = \frac{\text{Total Current Farm Assets}^5}{\text{Total Current Farm Liabilities}^5}$$

<sup>6</sup>Example: = 309,040/201,710 = 1.53

Working Capital is a measure of the amount of funds available to purchase inputs and inventory items after the sale of current farm assets and payment of all current farm liabilities. The amount of working capital considered adequate is related to the size and type of farm business. Working capital is defined as follows:

$$\text{Working Capital} = (\text{Total Current Farm Assets}) - (\text{Total Current Farm Liabilities})$$

Example: = 309,040 - 201,710 = \$107,330

These two liquidity indicators have some limitations.

1. The values are static, because they measure only financial resources available at a given point in time compared to the liabilities at that time. Future inflows in relation to outflows are not measured.

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<sup>4</sup> Accurate and complete balance sheet and income statements are required for the derivation of relevant financial ratios for farm businesses.

<sup>5</sup> Current farm assets are those assets that “turn over” in a normal year’s operation. Examples of current farm assets are crops held for sale or feed, livestock held for sale, cash on hand, and accounts receivable. Current liabilities are debts that come due within the year, including accrued expenses and the current portion of deferred taxes, as well as the portion of noncurrent debt due in the present year’s business.

<sup>6</sup> Ratio examples are derived from the example farm financial statements shown in Appendix Table 1. Appendix Table 2 provides a summary of liquidity, solvency, and profitability financial ratios utilizing the example farm financial statements. Appendix Tables 3-5 present example profitability and financial efficiency ratios based on value of farm production, gross revenue, and gross farm income versions of the computation of gross farm receipts.

2. The values do not measure the quality of current farm assets or whether the assets can be sold for the value shown on the balance sheet.
3. The values ignore committed lines of credit as financial resources available to assure timely payment of liabilities.
4. The values will vary by the type of farm business and throughout the yearly production cycle.

### **Solvency Indicators**

Solvency measures the amount of debt and other expense obligations used in the farm business relative to the amount of owner equity invested in the business. Solvency ratios indicate the business' ability to repay all financial obligations if all assets were sold, as well as the ability to continue operations as a viable farm business after a financial adversity such as a drought. These financial ratios that measure solvency are calculated from balance sheet data:

Debt/Asset Ratio  
Equity/Asset Ratio  
Debt/Equity Ratio

The Debt/Asset Ratio compares total farm liabilities to the value of total farm assets and, therefore, measures financial position. This ratio expresses what proportion of total farm assets is owed to creditors. It is one measure of the risk exposure for the farm business and, thus, is important for evaluating the financial trend of the business. The goal of most farm business operators is to eventually approach a debt-free operation. A continual lowering of this ratio is a trend in that direction. The higher the ratio, the greater the risk exposure of the farm business. The ratio is computed as follows:

$$\text{Debt/Asset Ratio} = \frac{\text{Total Farm Liabilities}}{\text{Total Farm Assets}}$$

$$\text{Example:} = (376,800/784,065) \times 100 = 48.06\%$$

The Equity/Asset Ratio measures the proportion of total farm assets financed by the owner's equity capital and, therefore, indicates financial position. The higher the ratio value, the more total capital has been supplied by the owner and the less capital supplied by creditors. The ratio is computed as follows:

$$\text{Equity/Asset Ratio} = \frac{\text{Total Farm Equity}}{\text{Total Farm Assets}}$$

$$\text{Example:} = (407,265/784,065) \times 100 = 51.94\%$$

The Debt/Equity Ratio measures financial position and reflects the extent to which farm debt capital is being combined with farm equity capital. The higher the ratio value, the more total capital has been supplied by creditors, and the less capital supplied by the owner. The ratio is computed as follows:

$$\text{Debt/Equity Ratio} = \frac{\text{Total Farm Liabilities}}{\text{Total Farm Equity}}$$

Example: = 376,800/407,265 = 0.93

These financial ratios have two limitations:

1. Standards are difficult to specify, because these ratios vary by type of farm business and from one agricultural producer to another. The range of acceptable ratio values will depend on a number of factors such as the fluctuations in farm asset values, that may occur because of changing demand for agricultural assets and the proportion of owned land used in the farm business.
2. These ratios are influenced greatly by the value placed on the farm assets.

### **Profitability Indicators**

Profitability measures the extent to which a farm business generates a profit from the use of labor, management, and capital. These financial ratios and values that measure profitability are calculated from balance sheet and income statement data:

Rate of Return on Farm Assets  
Rate of Return on Farm Equity  
Net Farm Income  
Operating Profit Margin Ratio

The Rate of Return on Farm Assets Ratio often is used as an overall index of profitability of the farm business. The higher the ratio value, the more profitable the farm business. The rate of return on farm assets is computed as follows:

$$\text{Rate of Return on Farm Assets} = \frac{\text{Return to Capital}}{\text{Average Total Farm Assets}}$$

Where,

$${}^7\text{Return to Capital} = \text{Net Farm Income} + \text{Interest Expense} - \text{Operator Unpaid Labor and Management Value} - \text{Unpaid Family Labor Value}$$

Example: (8,915/759,083) x 100 = 1.17%

The Rate of Return on Farm Equity Ratio provides a measure of the return on the owner's equity capital employed in the farm business. The higher the ratio value, the more profitable the farm operation.

The rate of return on farm equity is computed as follows:

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<sup>7</sup> The return to capital provides a measure of the operator's return to capital after giving credit for unpaid labor and management. A \$30,000 labor and management charge per operator was used in the calculation of the return to capital.

$$\text{Rate of Return on Farm Equity} = \frac{\text{Return to Equity Capital}}{\text{Average Total Farm Equity}}$$

Where,

$$\text{Return to Equity Capital} = \text{Return to Capital} - \text{Interest Expense}$$

$$\text{Example: } ((4,185)/393,875) \times 100 = (1.06\%)$$

Net Farm Income is defined as the return to operator's labor, management, and equity computed on an accrual basis. Net farm income is calculated by matching farm revenues with farm expenses incurred to create those revenues, but before taxes.

$$\text{Example: } \$47,100$$

The Operating Profit Margin Ratio measures profitability in terms of return per dollar of value of farm production.<sup>8</sup> A farm business has two ways to increase profits--either by increasing the profit per unit produced or by increasing the volume of production if the farm business is profitable. The ratio is computed as follows:

$$\text{Operating Profit Margin Ratio} = \frac{\text{Return to Capital}}{\text{Value of Farm Production}}$$

$$\text{Example: } = (8,915/167,500) \times 100 = 5.32\%$$

These profitability indicators have several limitations.

1. The value for the operator's unpaid labor and management must be calculated correctly; otherwise, the ratio value will be understated or overstated.
2. Net farm income is computed on a pretax basis.
3. Capital gains on real estate and other assets are not included in net farm income.<sup>9</sup> Thus, the rate of return of farm assets and equity ratios will seem low when compared to nonfarm investments such as stocks. Also, the values for these two ratios will vary with structural characteristics of the farm business, especially with the proportion of owned land or other assets used in the operation.

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<sup>8</sup> Gross revenues or gross farm income can be used as a substitute for the value of farm production. See Appendix Table 1 for income statement examples using this approach.

<sup>9</sup> Capital gains achieved in the farm business during the accounting year on real estate and other assets could be derived and then added to return to capital when computing the rate of return on farm assets, rate of return on farm equity, and operating profit margin ratios. This procedure would allow a more accurate comparison of the ratios to nonfarm investments.



4. Caution should be used when interpreting the rate of return on farm equity ratio. For example, a high ratio, normally associated with a profitable farm business, also may indicate a high leverage operation.

5. A dollar measurement, such as net farm income, is difficult to compare across farm businesses, especially across operations with different forms of business organizations.

### **Financial Efficiency Indicators**

Financial efficiency measures the intensity with which a farm business uses its assets to generate the value of farm production and the effectiveness of production, purchasing, pricing, financing, and marketing decisions. These financial efficiency ratios are calculated from balance sheet and income statement data:

Asset Turnover Ratio  
Operating Expense Ratio  
Depreciation Expense Ratio  
Interest Expense Ratio  
Total Expense Ratio  
Net Farm Income Ratio

The Asset Turnover Ratio measures how efficiently farm assets are being used to generate revenue. The higher the ratio value, the more efficiently assets are being used to generate revenue. The value of the ratio will vary depending on the type of farm operation. The ratio is computed as follows:

$$\text{Asset Turnover Ratio} = \frac{\text{Value of Farm Production}}{\text{Average Total Farm Assets}}$$

$$\text{Example: } = 167,500/759,083 = 0.22$$

A relationship exists among the rate of return on farm assets, the asset turnover ratio, and the operating profit margin ratio. If the asset turnover ratio is multiplied by the operating profit margin ratio, the result is the rate of return on farm assets.

The asset turnover ratio has two limitations.

1. Value of farm production income covers an accounting period, whereas the average for farm assets represents only two points within that accounting period.
2. The ratio shows wide variations depending on the type of farm business or the structural characteristics of the business.

The five operational ratios reflect the relationship of expense and income categories to value of farm production. The sum of the first three operational ratios equals the total expense ratio. The ratios are



computed as follows:

$$\text{Operating Expense Ratio} = \frac{\text{Total Operating Expense} - \text{Depreciation Expense}}{\text{Value of Farm Production}}$$

$$\text{Example:} = (81,375/167,500) \times 100 = 48.58\%$$

$$\text{Depreciation Expense Ratio} = \frac{\text{Depreciation Expense}}{\text{Value of Farm Production}}$$

$$\text{Example:} = (22,415/167,500) \times 100 = 13.39\%$$

$$\text{Interest Expense Ratio} = \frac{\text{Interest Expense}}{\text{Value of Farm Production}}$$

$$\text{Example:} = (16,600/167,500) \times 100 = 9.91\%$$

$$\text{Total Expense Ratio} = \frac{\text{Total Farm Expense}}{\text{Value of Farm Production}}$$

$$\text{Example:} = (120,400/167,500) \times 100 = 71.88\%$$

$$\text{Net Farm Income Ratio} = \frac{\text{Net Farm Income}}{\text{Value of Farm Production}}$$

$$\text{Example:} = (47,100/167,500) \times 100 = 28.12\%$$

## USES OF FINANCIAL RATIOS

The establishment of minimum or maximum values that all farm businesses should meet for each of the financial ratios is extremely difficult. One of the objectives in the use of financial ratios is to evaluate the condition of a farm business as a unit. A specific ratio concentrates attention upon specific details of the business. The use of a single ratio or placing excessive emphasis on one ratio may be misleading. For example, an agricultural producer that has just started a farm business may have a much higher debt/equity ratio than an agricultural producer who has built up the business over a longer time span. The young operator, even though of equal ability, compares his/her debt to a much smaller equity. But this same young operator may show a more desirable rate of return to equity than his/her older counterpart, again because of the lower equity base.

The interpretation of one ratio may be altered by other ratios for the same business. Thus, some lending institutions, agricultural producers, and farm advisors have selected a group of ratios that they believe give a composite picture of the farm business. The calculated ratios of a specific farm business are then interpreted as a group rather than making judgements on individual ratios.

Another objective in the use of financial ratios is to detect strengths and weaknesses within a farm business. Comparison of ratios of a farm business to ratios of other farm businesses of similar type may detect strengths or weaknesses. Comparing to established standards or benchmarks also is helpful. Comparison to ratios in earlier years indicates progress made within the farm business.

In this study, financial information from farms enrolled in the KFMA program for the period 1991 to 1996 was used to derive average liquidity, solvency, profitability, and financial efficiency ratios for the whole state, six regions, and various farm types. The derivation of these average farm financial ratios for Kansas farms is the first step toward the formulation of benchmark ratio values.

## RESULTS

Tables 1 and 2 outline average farm financial ratios on state and regional bases. The operating profit margin and financial efficiency ratios are presented for the three income approaches of value of farm production (VFP), gross revenue (GR), and gross farm income (GFI).

The derived current ratio was 1.92 based on an average of 2,099 farms for the state. That is, the average farm had \$1.92 of current assets for every \$1 of current liabilities. Working capital averaged \$70,327. The debt to asset and debt to equity solvency ratios averaged .34 and .50, respectively. The debt to asset ratio expresses what proportion of total farm assets is owed to creditors and, thus, is an important measure of the risk exposure of the farm business. The strong financial position of Kansas farms is shown by the debt to asset ratio value of .34 indicating that only \$0.34 of each \$1 of assets is owed to creditors. Net farm income averaged \$36,980 for the 6-year period, with an operating profit margin (VFP) ratio of 11.05%. Operating and interest expense financial efficiency ratios were 61.36 and 9.06%, respectively, for the VFP income approach.

On a regional basis, derived current ratios varied from a low of 1.53 in north central Kansas to a high of 2.17 in the southeast region. Working capital was lowest in the north central region at \$40,216. The debt to asset ratio ranged from a low of .31 in northeast Kansas to a high of .38 in the northwest and north central regions. Northeast Kansas had the lowest debt to equity ratio at .45. The southwest region had the highest average net farm income at \$40,041, although the highest operating profit margin ratio was in northwest Kansas at 15.94%. The operating expense (VFP) efficiency ratio varied from a low of 58.94% in the southeast region to a high of 64.56% in southwest Kansas.

The derived ratios for rates of return on farm assets and on farm equity were 3.52% and 1.12%, respectively, for the state.<sup>10</sup> On a regional basis, the rate of return to farm assets ranged from a high of 4.62% in northwest Kansas to a low of 2.33% in the north central region. The north central region also had the lowest rate of return on equity ratio at (1.43%).

Tables 3 and 4 provide average farm financial ratios for Kansas farm types: cow herd, sow and litter (market), crop-dairy, and crop-sow and litter (market).<sup>11</sup> Among farm types analyzed on a statewide basis, cow herd farms had the highest current ratio at 3.43 and the lowest debt to asset ratio at .23. Even though this farm type had the lowest risk exposure as measured by the debt to asset ratio, it had the lowest net farm income, rate of return to farm assets, and operating profit margin at \$9,327, a negative 2.10% and a negative 18.37%, respectively. The most profitable farm type was sow and litter (market), with net farm income and rate of return to farm asset values of \$78,125 and 6.69%, respectively.

Tables 6 through 17 outline farm financial ratios on state and regional bases for the following farm types: crop-nonirrigated, crop-irrigated, dairy, crop-cow herd, crop-beef backgrounding, and crop-beef. Risk exposure as measured by the debt to asset ratio was the lowest for crop-cow herd (.26), dairy (.30), and crop-beef (.30) farms. Yet, the crop-cow herd farms had the lowest net farm income value of \$17,178. The crop-irrigated farms had the highest net farm income and rate of return to assets of \$57,602 and 6.61%, respectively. The crop-cow herd and crop-beef backgrounding farms had negative rates of return on farm equity in all regions.

Figure 1 provides information on the rate of return to farm assets by farm type on a statewide basis. Most of the farm types, except for cow herd and crop cow herd farms, had positive average rate of return to farm assets over the 1991-96 period. The crop-irrigated and sow and litter (market) farm types had the highest rate of return to farm assets over the period 1991-96.

As shown in Figure 2, crop-irrigated farms had the highest operating profit margin ratios, whereas cow herd farms had the lowest ratios. The operating profit margin ratios were positive for most farm types, except for cow herd and crop-cow herd farms.

Figure 3 outlines the current ratio values by farm type. Dairy farms had the lowest ratio value at 1.23, whereas cow herd farms had the highest value at 3.43. Even though cow herd farms had a high current ratio, the net farm income value for these farms was the lowest of any farm type over the period of 1991-96. Figure 4 provides debt to asset ratios by farm type. Crop-backgrounding farms had the highest ratio at .49, and cow herd farms had the lowest ratio at .23.

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<sup>10</sup> Gains or losses achieved in the farm business during the accounting year on real estate owned were not included in the average net farm income values and, thus, the return to capital values. The average percentage increases in land values by region during the period 1991-96 as provided by the Kansas Agricultural Statistics, Kansas Board of Agriculture, U.S. Department of Agriculture were: northwest-3.03%, southwest-2.66%, north central-3.85%, south central-2.33%, northeast-4.11%, southeast-3.42%, and state-3.29%. Total farm assets would need to be increased by these annual inflation rates in the value of owned real estate to determine the true rate of return to farm assets and equity.

<sup>11</sup> The small number of farms typed as cow herd, sow and litter (market), crop-dairy, and crop-sow and litter (market) did not allow for a derivation of farm financial ratios on a regional basis.

In a 1995 study of financial ratios, David M. Kohl outlined benchmark ranges for selected farm financial ratios.<sup>12</sup> Benchmark ranges were determined for the three categories of excellent, good, and poor as a measurement of the financial position of the farm business operation for each of the selected farm financial ratios shown in Table 17. Farm businesses with farm financial ratios that are in the excellent to good categories have fewer financial problems or weaknesses than farm operations that have ratios in the poor category. Farm businesses that have a number of farm financial ratios that are in the poor category may have considerable financial problems.

The average financial ratios derived in this analysis for various farm types on a state-wide basis for the period 1991 to 1996 as shown in Tables 1-16 were primarily in the excellent to good benchmark ranges outlined by Kohl's study. The debt-to-asset ratios for nearly all farm types were less than 0.40, except for crop-beef backgrounding farms, which had a value of 0.49. The farm types of cow herd, crop-dairy, and crop-cow herd had debt-to-asset ratios less than 0.30. The current ratios for nearly all farm types were greater than 1.25, except for dairy farms, which had a current ratio value of 1.23. For all farm types, the operating expense ratios were less than 0.75.

The working capital to expenses ratios for the farm types of crop-dairy, crop-irrigated, and crop-beef backgrounding were in the good benchmark range, with values of 0.44, 0.43, and 0.40, respectively. Dairy farms had a working capital to expense ratio of 0.08, which was in the poor category of benchmark ranges.<sup>13</sup> All the other farm types were in the excellent benchmark ratio range, with working capital to expense ratios greater than 0.50. All of the farm types had equity-to-asset and debt-to-equity ratios that were in the excellent to good benchmark range. The crop-beef backgrounding farms had the highest debt-to-equity ratio at 0.94.

In another study, Ann H. Durkes derived average financial ratios for various farm types for Kansas farms for the period 1978 to 1995.<sup>14</sup> Table 18 outlines selected farm financial ratio values for the state and various farm types as determined in that study. The period 1978-1995 included the farm financial crisis years of 1981 through 1985, when net farm income averaged only \$6,434 per year for farms enrolled in the KFMA program. Thus, the net farm income values for all farm types derived in the Durkes's study were lower than those income levels obtained in this analysis. Even then, the average farm financial ratios derived in this analysis as outlined in Tables 1 through 16 were very similar to the ratio values shown in Table 18. In this analysis, the debt-to-asset values were slightly lower for most of all the farm types, except for crop-cow herd and crop-beef backgrounding farms. For these two farm types, the net farm income values for the periods of 1978-1995 and 1991-1996 were very similar.

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<sup>12</sup> David M. Kohl, Professor, Virginia Tech University, "Financial Analysis and Benchmarks for the Late 90's," paper presented at the National Association of Farm Business Specialists Conference, Charleston, South Carolina, June, 1995.

<sup>13</sup> Current assets, and thus working capital, do not include the value of breeding livestock.

<sup>14</sup> Ann H. Durkes, "Financial Ratio Analysis of Kansas Farms: Liquidity, Solvency, Profitability, and Financial Efficiency," Unpublished M.S. Thesis, July, 1998. Data from farms enrolled in the KFMA program were utilized in this study to determine the average farm financial ratios. The study derived financial efficiency ratios only for the gross farm income method of computing gross farm receipts, and current assets included the value of breeding livestock.

## CONCLUSIONS

The farm financial ratio values derived on statewide and regional bases from actual farm financial information for the period 1991 to 1996 were very similar. The debt-to-asset ratio ranged from a low of 0.31 in northeast Kansas to a high of 0.38 in the northwest and north central regions. However, the rate of return on farm assets was the highest in northwest Kansas at 4.62%. The operating expense ratio obtained using the value of farm production income method was 61.36% for the state, and the southeast region had the lowest value at 58.94%.

The farm financial ratio values derived for the various farm types showed a wide variation, although only a few of the ratio values indicated financial problems or weaknesses in the farm businesses. On a statewide basis, the debt-to-asset ratio values varied from a low of 0.23 for the cow herd farms to a high of 0.49 for the crop-beef backgrounding farms. The sow and litter (market) farms had the highest rate of return on farm assets at 6.69% followed by crop-irrigated farms at 6.61%. Dairy farms had the lowest current ratio value at 1.23.

This study developed a set of average farm financial ratios that can serve as the first step in the derivation of benchmark ratio values. Comparison of farm financial ratios of a farm business to ratios of other farm businesses of similar type and size may provide the information needed to detect strengths and weaknesses in the operational unit. However, agricultural producers need to study a number of farm financial ratios rather than base the profitability of the farm business on only one or two ratios. For example, cow herd farms had the lowest debt-to-asset ratio of 0.23 and the highest current ratio of 3.43, but also the lowest net farm income and rate of return to farm assets ratio values of \$9,327 and -2.10%, respectively. When benchmark values are available, an agricultural producer should compare a number of farm financial ratios against them to determine the strengths and weaknesses of his/her farm business.

**TABLE 1. DERIVED LIQUIDITY, SOLVENCY, AND PROFITABILITY RATIOS FOR KANSAS FARMS, BY REGION AND STATE, 1991 TO 1996.**

Variable	State	Northwest	Southwest	North Central	South Central	Northeast	Southeast
Number of Farms	2,099	228	231	294	362	385	600
Gross Income Level:							
Value of Farm Production	\$173,697	\$188,145	\$207,359	\$151,638	\$159,160	\$179,846	\$171,758
Gross Revenue	\$255,210	\$255,003	\$286,212	\$235,461	\$215,798	\$280,182	\$260,855
Gross Farm Income	\$201,856	\$207,598	\$223,568	\$182,161	\$194,181	\$215,513	\$207,728
Liquidity Ratios:							
Current Ratio	1.92	1.69	1.91	1.53	1.79	2.09	2.17
Working Capital	\$70,327	\$67,441	\$83,157	\$40,216	\$51,819	\$79,727	\$85,963
Solvency Ratios:							
Debt/Asset Ratio	.34	.38	.32	.38	.34	.31	.33
Equity/Asset Ratio	.66	.62	.68	.62	.66	.69	.67
Debt/Equity Ratio	.50	.60	.46	.61	.51	.45	.49
Profitability Ratios:							
Rate of Return on Farm Assets	3.52%	4.62%	3.76%	2.23%	2.97%	3.15%	3.91%
Rate of Return on Farm Equity	1.12%	2.37%	1.75%	-1.43%	.67%	.76%	1.78%
Net Farm Income	\$36,980	\$39,755	\$40,041	\$28,326	\$33,535	\$38,469	\$39,676
Operating Profit Margin (VFP)	11.05%	15.94%	11.36%	6.26%	6.45%	9.03%	12.76%
Operating Profit Margin (GR)	7.59%	11.84%	8.27%	4.26%	6.71%	6.01%	8.47%
Operating Profit Margin (GFI)	9.51%	14.48%	10.53%	5.31%	7.91%	7.73%	10.54%

**TABLE 2. DERIVED FINANCIAL EFFICIENCY RATIOS FOR KANSAS FARMS, BY REGION AND STATE, 1991 TO 1996.**

Variable	State	Northwest	Southwest	North Central	South Central	Northeast	Southeast
<b>Value of Farm Production:</b>							
Asset Turnover Ratio	.30	.28	.32	.31	.31	.30	.29
Operating Expense Ratio	61.36%	60.15%	64.56%	62.61%	62.04%	62.33%	58.94%
Interest Expense Ratio	9.06%	11.01%	7.94%	10.20%	8.31%	8.49%	9.24%
Depreciation Expense Ratio	8.29%	7.71%	8.19%	8.51%	8.58%	7.79%	8.72%
Net Farm Income Ratio	21.29%	21.13%	19.31%	18.68%	21.07%	21.39%	23.10%
<b>Gross Revenue:</b>							
Asset Turnover Ratio	.46	.39	.44	.49	.45	.49	.45
Operating Expense Ratio	73.85%	70.86%	74.32%	76.22%	72.14%	76.01%	73.16%
Interest Expense Ratio	6.09%	7.96%	5.74%	6.40%	6.07%	5.34%	5.98%
Depreciation Expense Ratio	5.57%	5.59%	5.95%	5.35%	6.25%	4.92%	5.65%
Net Farm Income Ratio	14.49%	15.59%	13.99%	12.03%	15.54%	13.73%	15.21%
<b>Gross Farm Income:</b>							
Asset Turnover Ratio	.35	.32	.35	.38	.36	.37	.35
Operating Expense Ratio	66.82%	63.99%	67.21%	69.08%	67.30%	68.69%	66.13%
Interest Expense Ratio	7.76%	9.91%	7.31%	8.38%	7.62%	7.02%	7.59%
Depreciation Expense Ratio	7.10%	6.95%	7.57%	7.01%	7.81%	6.44%	7.18%
Net Farm Income Ratio	18.32%	19.15%	17.91%	15.55%	17.27%	17.85%	19.10%



**TABLE 3. DERIVED LIQUIDITY, SOLVENCY, AND PROFITABILITY RATIOS FOR SELECTED KANSAS FARM TYPES, STATE, 1991 TO 1996.**

Farm Type	Variable	Cow Herd	Sow & Litter (Market)	Crop -Dairy	Crop-Sow & Litter (Market)
	Number of Farms	20	19	36	42
	Gross Income Level:				
	Value of Farm Production	\$58,476	\$321,106	\$247,258	\$191,958
	Gross Revenue	\$88,324	\$547,861	\$306,038	\$278,115
	Gross Farm Income	\$74,319	\$529,302	\$291,579	\$254,089
	Liquidity Ratios:				
	Current Ratio	3.43	2.77	2.65	2.27
41	Working Capital	\$45,971	\$153,539	\$80,592	\$87,217
	Solvency Ratios:				
	Debt/Asset Ratio	.23	.32	.26	.35
	Equity/Asset Ratio	.77	.68	.74	.65
	Debt/Equity Ratio	.31	.48	.35	.54
	Profitability Ratios:				
	Rate of Return on Farm Assets	-2.10%	6.69%	4.71%	3.91%
	Rate of Return on Farm Equity	-5.26%	5.67%	3.34%	1.44%
	Net Farm Income	\$9,327	\$78,125	\$62,952	\$42,941
	Operating Profit Margin (VFP)	-18.37%	15.96%	12.65%	10.62%
	Operating Profit Margin (GR)	-12.54%	9.27%	10.29%	7.34%
	Operating Profit Margin (GFI)	-14.57%	9.54%	10.76%	8.17%

**TABLE 4. DERIVED FINANCIAL EFFICIENCY RATIOS FOR SELECTED KANSAS FARM TYPES, STATE, 1991 TO 1996.**

Variable	Farm Type			
	Cow Herd	Sow & Litter (Market)	Crop -Dairy	Crop-Sow & Litter (Market)
<b>Value of Farm Production:</b>				
Asset Turnover Ratio	.16	.39	.36	.32
Operating Expense Ratio	63.26%	60.29%	59.54%	59.38%
Interest Expense Ratio	12.16%	6.41%	6.28%	9.19%
Depreciation Expense Ratio	8.63%	8.97%	8.72%	9.06%
Net Farm Income Ratio	15.95%	24.33%	25.46%	22.37%
<b>Gross Revenue:</b>				
Asset Turnover Ratio	.26	.69	.44	.47
Operating Expense Ratio	75.44%	77.05%	67.40%	72.02%
Interest Expense Ratio	8.21%	3.64%	5.04%	6.31%
Depreciation Expense Ratio	5.79%	5.05%	6.99%	6.23%
Net Farm Income Ratio	10.56%	14.26%	20.57%	15.44%
<b>Gross Farm Income:</b>				
Asset Turnover Ratio	.22	.66	.42	.43
Operating Expense Ratio	70.70%	76.19%	65.72%	69.44%
Interest Expense Ratio	9.88%	3.77%	5.32%	6.89%
Depreciation Expense Ratio	6.86%	5.28%	7.37%	6.76%
Net Farm Income Ratio	12.55%	14.76%	21.59%	16.90%

**TABLE 5. DERIVED LIQUIDITY, SOLVENCY, AND PROFITABILITY RATIOS FOR KANSAS CROP-NONIRRIGATED FARMS, BY REGION AND STATE, 1991 TO 1996.**

Variable	State	Northwest	Southwest	North Central	South Central	Northeast	Southeast
Number of Farms	1,132	88	105	142	271	217	308
Gross Income Level:							
Value of Farm Production	\$163,492	\$162,916	\$160,790	\$153,274	\$150,868	\$179,680	\$179,511
Gross Revenue	\$196,721	\$194,356	\$196,800	\$166,356	\$173,276	\$227,417	\$212,197
Gross Farm Income	\$171,479	\$173,286	\$169,273	\$145,639	\$157,059	\$192,329	\$189,798
Liquidity Ratios:							
Current Ratio	1.84	1.88	2.62	1.70	1.97	2.18	2.38
Working Capital	\$62,581	\$56,520	\$79,739	\$36,739	\$49,939	\$67,986	\$77,242
Solvency Ratios:							
Debt/Asset Ratio	.33	.32	.24	.35	.32	.32	.35
Equity/Asset Ratio	.67	.68	.76	.65	.68	.68	.65
Debt/Equity Ratio	.48	.46	.32	.54	.48	.47	.55
Profitability Ratios:							
Rate of Return on Farm Assets	3.88%	4.90%	2.41%	2.45%	3.08%	3.85%	5.30%
Rate of Return on Farm Equity	1.77%	3.16%	0.57%	-0.79%	-0.05%	1.71%	3.67%
Net Farm Income	\$37,554	\$40,601	\$34,007	\$27,482	\$34,066	\$39,889	\$44,052
Operating Profit Margin (VFP)	11.40%	17.68%	8.17%	6.50%	9.06%	10.07%	14.78%
Operating Profit Margin (GR)	9.59%	15.04%	6.76%	5.70%	7.95%	8.27%	12.53%
Operating Profit Margin (GFI)	10.83%	16.82%	7.69%	6.22%	8.55%	9.56%	13.97%

**TABLE 6. DERIVED FINANCIAL EFFICIENCY RATIOS FOR KANSAS CROP-NONIRRIGATED FARMS, BY REGION AND STATE, 1991 TO 1996.**

	State	Northwest	Southwest	North Central	South Central	Northeast	Southeast
<b>Value of Farm Production:</b>							
Asset Turnover Ratio	.32	.28	.28	.32	.33	.33	.34
Operating Expense Ratio	60.16%	57.93%	62.67%	63.52%	61.10%	61.64%	57.86%
Interest Expense Ratio	8.22%	9.91%	6.95%	9.58%	7.64%	7.92%	8.54%
Depreciation Expense Ratio	8.65%	7.57%	9.23%	8.97%	8.68%	8.24%	9.06%
Net Farm Income Ratio	22.97%	24.59%	21.15%	17.93%	22.58%	22.20%	24.54%
<b>Gross Revenue:</b>							
Asset Turnover Ratio	.39	.32	.35	.39	.38	.43	.40
Operating Expense Ratio	67.01%	64.32%	69.56%	68.75%	66.21%	70.10%	64.47%
Interest Expense Ratio	6.77%	8.38%	5.67%	7.61%	6.61%	6.05%	7.16%
Depreciation Expense Ratio	7.13%	6.41%	7.49%	7.12%	7.52%	6.31%	7.61%
Net Farm Income Ratio	19.09%	20.89%	17.28%	16.52%	19.66%	17.54%	20.76%
<b>Gross Farm Income:</b>							
Asset Turnover Ratio	.34	.29	.30	.34	.34	.36	.35
Operating Expense Ratio	62.28%	59.92%	64.63%	63.93%	62.51%	64.35%	60.22%
Interest Expense Ratio	7.78%	9.43%	6.53%	8.91%	7.43%	7.31%	8.04%
Depreciation Expense Ratio	8.18%	7.22%	8.75%	8.29%	8.37%	7.60%	8.53%
Net Farm Income Ratio	21.90%	23.43%	20.09%	18.87%	21.69%	20.74%	23.21%

**TABLE 7. DERIVED LIQUIDITY, SOLVENCY, AND PROFITABILITY RATIOS FOR KANSAS CROP-IRRIGATED FARMS, BY REGION AND STATE, 1991 TO 1996.**

Variable	State	Northwest	Southwest	South Central
Number of Farms	153	49	81	17
Gross Income Level:				
Value of Farm Production	\$279,032	\$289,207	\$283,441	\$249,542
Gross Revenue	\$336,264	\$340,868	\$341,093	\$292,891
Gross Farm Income	\$294,188	\$301,150	\$296,454	\$261,244
Liquidity Ratios:				
Current Ratio	1.85	1.98	2.53	1.47
Working Capital	\$95,193	\$116,325	\$83,716	\$46,514
Solvency Ratios:				
Debt/Asset Ratio	.38	.40	.27	.36
Equity/Asset Ratio	.62	.60	.72	.64
Debt/Equity Ratio	.61	.68	.57	.58
Profitability Ratios:				
Rate of Return on Farm Assets	6.61%	7.14%	6.25%	5.86%
Rate of Return on Farm Equity	5.87%	6.72%	5.49%	4.49%
Net Farm Income	\$57,602	\$61,254	\$56,178	\$51,256
Operating Profit Margin (VFP)	16.22%	18.47%	11.13%	15.86%
Operating Profit Margin (GR)	13.62%	16.25%	12.03%	13.63%
Operating Profit Margin (GFI)	15.56%	18.39%	13.93%	15.19%

**TABLE 8. DERIVED FINANCIAL EFFICIENCY RATIOS FOR KANSAS CROP-IRRIGATED FARMS, BY REGION AND STATE, 1991 TO 1996.**

Variable	State	Northwest	Southwest	South Central
<b>Value of Farm Production:</b>				
Asset Turnover Ratio	.40	.33	.42	.35
Operating Expense Ratio	64.51%	62.33%	66.24%	62.10%
Interest Expense Ratio	7.70%	9.32%	6.59%	8.83%
Depreciation Expense Ratio	7.34%	7.17%	7.35%	8.53%
Net Farm Income Ratio	20.45%	21.18%	19.82%	20.54%
<b>Gross Revenue:</b>				
Asset Turnover Ratio	.47	.42	.51	.42
Operating Expense Ratio	70.30%	68.31%	71.98%	67.83%
Interest Expense Ratio	6.43%	7.86%	5.44%	7.50%
Depreciation Expense Ratio	6.14%	5.84%	6.11%	7.17%
Net Farm Income Ratio	17.13%	17.97%	16.47%	17.50%
<b>Gross Farm Income:</b>				
Asset Turnover Ratio	.41	.37	.44	.37
Operating Expense Ratio	66.05%	64.17%	67.79%	64.09%
Interest Expense Ratio	7.36%	8.89%	6.26%	8.11%
Depreciation Expense Ratio	7.01%	6.60%	7.00%	8.18%
Net Farm Income Ratio	19.58%	20.34%	18.95%	19.62%

**TABLE 9. DERIVED LIQUIDITY, SOLVENCY, AND PROFITABILITY RATIOS FOR KANSAS DAIRY FARMS, BY REGION AND STATE, 1991 TO 1996.**

Variable	State	North Central	South Central	Northeast	Southeast
Number of Farms	94	19	17	27	29
Gross Income Level:					
Value of Farm Production	\$199,208	\$188,930	\$144,575	\$212,421	\$233,229
Gross Revenue	\$295,699	\$264,731	\$224,873	\$322,645	\$343,360
Gross Farm Income	\$284,685	\$259,814	\$218,701	\$303,459	\$333,681
Liquidity Ratios:					
Current Ratio	1.23	1.07	1.57	1.24	1.25
Working Capital	\$13,048	\$1,304	\$21,538	\$15,332	\$15,592
Solvency Ratios:					
Debt/Asset Ratio	.30	.29	.28	.29	.31
Equity/Asset Ratio	.73	.71	.72	.71	.69
Debt/Equity Ratio	.50	.41	.39	.43	.47
Profitability Ratios:					
Rate of Return on Farm Assets	2.23%	2.37%	0.94%	2.31%	2.51%
Rate of Return on Farm Equity	-0.29%	0.12%	-1.63%	-0.06%	-0.18%
Net Farm Income	\$39,742	\$34,971	\$32,674	\$44,396	\$42,611
Operating Profit Margin (VFP)	5.81%	5.66%	2.54%	5.47%	6.92%
Operating Profit Margin (GR)	3.89%	3.99%	1.66%	3.58%	4.67%
Operating Profit Margin (GFI)	4.14%	4.07%	1.70%	4.15%	4.82%



**TABLE 10. DERIVED FINANCIAL EFFICIENCY RATIOS FOR KANSAS DAIRY FARMS, BY REGION AND STATE, 1991 TO 1996.**

Item	State	North Central	South Central	Northeast	Southeast
Value of Farm Production:					
Asset Turnover Ratio	.35	.38	.36	.35	.35
Operating Expense Ratio	65.79%	67.29%	64.21%	65.20%	66.84%
Interest Expense Ratio	6.86%	6.17%	5.76%	6.89%	7.42%
Depreciation Expense Ratio	7.40%	8.03%	7.43%	7.01%	7.47%
Net Farm Income Ratio	19.95%	18.51%	22.60%	20.90%	18.27%
Gross Revenue:					
Asset Turnover Ratio	.53	.53	.57	.53	.52
Operating Expense Ratio	76.93%	76.61%	76.88%	77.09%	77.47%
Interest Expense Ratio	4.63%	4.42%	3.71%	4.53%	5.05%
Depreciation Expense Ratio	5.00%	5.76%	4.78%	4.62%	5.07%
Net Farm Income Ratio	13.44%	13.21%	14.53%	13.76%	12.41%
Gross Farm Income:					
Asset Turnover Ratio	.51	.51	.55	.51	.50
Operating Expense Ratio	76.08%	76.15%	76.33%	75.68%	76.83%
Interest Expense Ratio	4.79%	4.51%	3.81%	4.85%	5.19%
Depreciation Expense Ratio	6.11%	5.88%	4.92%	4.85%	5.21%
Net Farm Income Ratio	13.96%	13.46%	14.94%	14.63%	12.77%

**TABLE 11. DERIVED LIQUIDITY, SOLVENCY, AND PROFITABILITY RATIOS FOR KANSAS CROP-COW HERD FARMS, BY REGION AND STATE, 1991 TO 1996.**

Variable	State	Northwest	Southwest	North Central	South Central	Northeast	Southeast
Number of Farms	166	35	15	31	8	32	45
Gross Income Level:							
Value of Farm Production	\$103,171	\$130,218	\$116,784	\$104,374	\$87,711	\$94,010	\$83,034
Gross Revenue	\$136,768	\$163,327	\$149,955	\$140,755	\$118,053	\$126,745	\$112,290
Gross Farm Income	\$115,989	\$141,694	\$129,001	\$116,180	\$104,206	\$107,201	\$95,282
Liquidity Ratios:							
Current Ratio	2.07	1.67	2.42	1.39	2.90	3.10	2.52
Working Capital	\$54,757	\$40,422	\$66,671	\$26,168	\$57,890	\$80,940	\$62,280
Solvency Ratios:							
Debt/Asset Ratio	.26	.35	.26	.38	.21	.18	.21
Equity/Asset Ratio	.74	.65	.74	.62	.79	.83	.79
Debt/Equity Ratio	.36	.55	.35	.62	.28	.21	.26
Profitability Ratios:							
Rate of Return on Farm Assets	-0.42%	2.40%	-0.72%	-0.75%	-2.43%	-1.33%	-1.52%
Rate of Return on Farm Equity	-3.51%	-0.93%	-4.10%	-5.69%	-5.47%	-3.19%	-4.09%
Net Farm Income	\$17,178	\$26,851	\$16,525	\$14,174	\$10,306	\$16,198	\$12,015
Operating Profit Margin (VFP)	-2.42%	8.98%	-4.47%	-4.19%	-14.53%	-8.77%	-10.63%
Operating Profit Margin (GR)	-1.91%	7.17%	-3.95%	-3.13%	-11.64%	-6.41%	-7.81%
Operating Profit Margin (GFI)	-2.13%	8.23%	-4.13%	-3.64%	-12.21%	-7.51%	-9.06%

**TABLE 12. DERIVED FINANCIAL EFFICIENCY RATIOS FOR KANSAS CROP-COW HERD FARMS, BY REGION AND STATE, 1991 TO 1996.**

Item	State	Northwest	Southwest	North Central	South Central	Northeast	Southeast
Value of Farm Production:							
Asset Turnover Ratio	.20	.25	.18	.25	.19	.16	.17
Operating Expense Ratio	64.27%	58.97%	63.21%	67.68%	69.32%	66.93%	66.15%
Interest Expense Ratio	10.70%	12.25%	12.39%	11.25%	10.01%	8.10%	10.00%
Depreciation Expense Ratio	8.38%	8.16%	10.25%	7.49%	8.92%	7.74%	9.38%
Net Farm Income Ratio	16.65%	20.62%	14.15%	13.58%	11.75%	17.23%	14.47%
Gross Revenue:							
Asset Turnover Ratio	.27	.31	.24	.34	.25	.22	.24
Operating Expense Ratio	72.94%	67.18%	70.98%	76.01%	76.68%	75.55%	75.00%
Interest Expense Ratio	8.13%	9.83%	9.83%	8.36%	7.68%	5.97%	7.39%
Depreciation Expense Ratio	6.37%	6.55%	8.17%	5.56%	6.91%	5.70%	6.91%
Net Farm Income Ratio	12.56%	16.44%	11.02%	10.07%	8.73%	12.78%	10.70%
Gross Farm Income:							
Asset Turnover Ratio	.23	.27	.20	.29	.23	.19	.20
Operating Expense Ratio	68.32%	62.33%	66.73%	71.40%	74.17%	71.21%	70.65%
Interest Expense Ratio	9.45%	11.23%	11.19%	9.79%	8.46%	7.00%	8.64%
Depreciation Expense Ratio	7.43%	7.49%	9.27%	6.61%	7.48%	6.68%	8.10%
Net Farm Income Ratio	14.81%	18.95%	12.81%	12.20%	9.89%	15.11%	12.61%

**TABLE 13. DERIVED LIQUIDITY, SOLVENCY, AND PROFITABILITY RATIOS FOR KANSAS CROP-BEEF BACKGROUNDING FARMS, BY REGION AND STATE, 1991 TO 1996.**

Variable	State	North Central	Northeast	Southeast
Number of Farms	84	24	11	25
Gross Income Level:				
Value of Farm Production	\$206,380	\$201,190	\$161,749	\$183,501
Gross Revenue	\$509,666	\$305,029	\$441,188	\$482,932
Gross Farm Income	\$268,829	\$273,724	\$214,898	\$264,298
Liquidity Ratios:				
Current Ratio	1.37	1.24	1.74	1.56
Working Capital	\$72,717	\$45,806	\$113,610	\$103,170
Solvency Ratios:				
Debt/Asset Ratio	.49	.60	.45	.44
Equity/Asset Ratio	.51	.40	.55	.56
Debt/Equity Ratio	.94	1.54	.82	.81
Profitability Ratios:				
Rate of Return on Farm Asset	2.99%	2.56%	1.67%	3.10%
Rate of Return on Farm Equity	-2.43%	-7.06%	-4.64%	-1.30%
Net Farm Income	\$25,942	\$20,803	\$24,133	\$27,672
Operating Profit Margin (VFP)	10.20%	7.50%	6.04%	11.58%
Operating Profit Margin (GR)	4.16%	6.08%	2.37%	4.42%
Operating Profit Margin (GFI)	7.80%	5.47%	4.51%	8.00%

**TABLE 14. DERIVED FINANCIAL EFFICIENCY RATIOS FOR KANSAS CROP-BEEF BACKGROUNDING FARMS, BY REGION AND STATE, 1991 TO 1996.**

Item	State	North Central	Northeast	Southeast
Value of Farm Production:				
Asset Turnover Ratio	.27	.29	.24	.24
Operating Expense Ratio	64.23%	63.86%	63.36%	62.21%
Interest Expense Ratio	15.56%	17.70%	16.10%	15.49%
Depreciation Expense Ratio	7.64%	8.10%	5.62%	7.22%
Net Farm Income Ratio	12.57%	10.34%	14.92%	15.08%
Gross Revenue:				
Asset Turnover Ratio	.69	.93	.72	.67
Operating Expense Ratio	86.05%	84.65%	87.30%	86.12%
Interest Expense Ratio	5.93%	5.91%	5.31%	5.57%
Depreciation Expense Ratio	2.93%	2.62%	1.92%	2.58%
Net Farm Income Ratio	5.09%	6.82%	5.47%	5.73%
Gross Farm Income:				
Asset Turnover Ratio	.35	.39	.32	.35
Operating Expense Ratio	72.85%	73.04%	72.50%	74.20%
Interest Expense Ratio	11.75%	13.31%	12.07%	10.45%
Depreciation Expense Ratio	5.76%	6.05%	4.20%	4.88%
Net Farm Income Ratio	9.65%	7.60%	11.23%	10.47%

**TABLE 15. DERIVED LIQUIDITY, SOLVENCY, AND PROFITABILITY RATIOS FOR KANSAS CROP-BEEF FARMS, BY REGION AND STATE, 1991 TO 1996.**

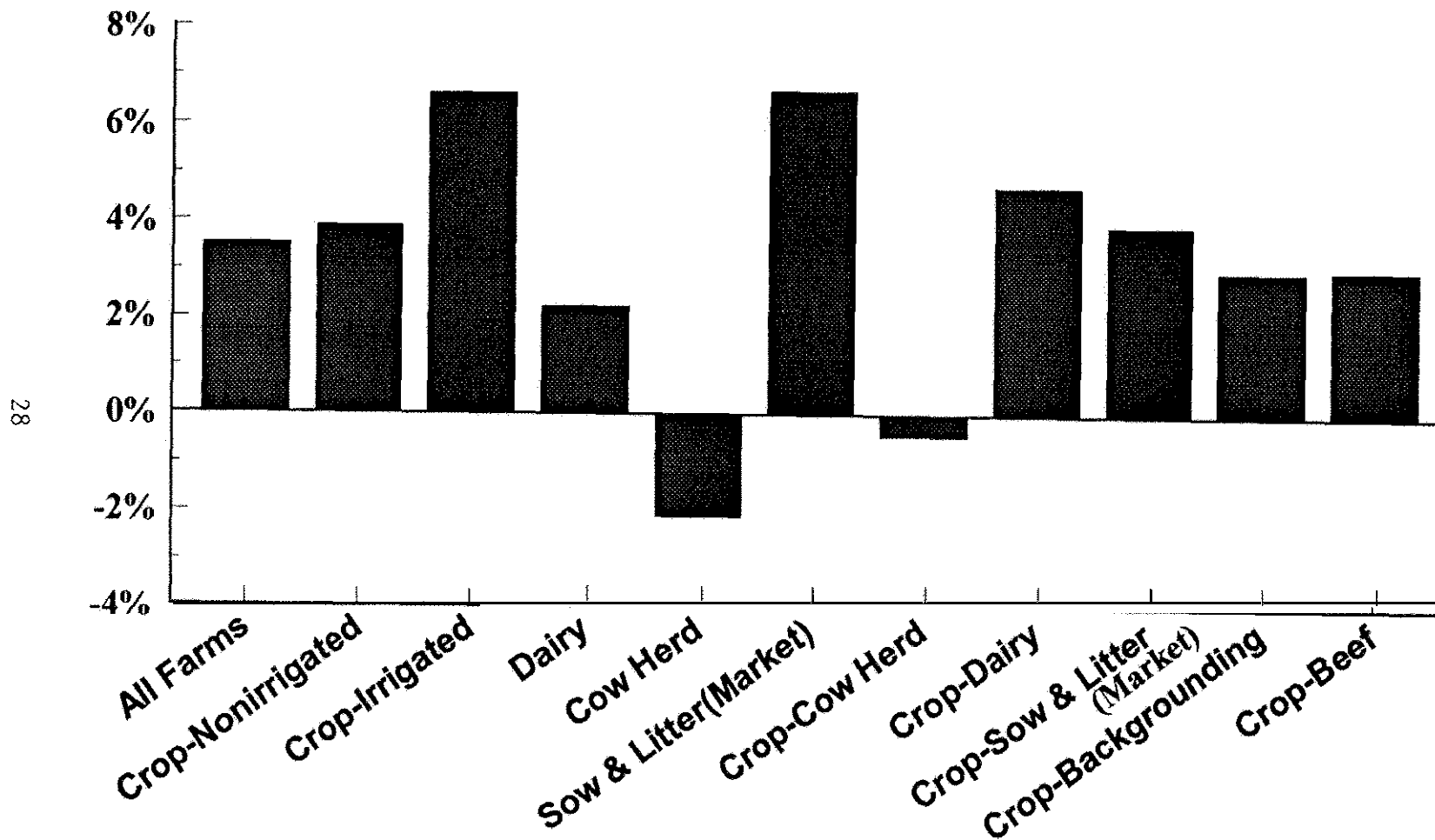
Variable	State	Northwest	North Central	Northeast	Southeast
Number of Farms	83	14	19	12	28
Gross Income Level:					
Value of Farm Production	\$172,482	\$200,345	\$153,029	\$171,491	\$165,139
Gross Revenue	\$255,512	\$267,126	\$233,192	\$250,072	\$255,523
Gross Farm Income	\$193,988	\$221,368	\$168,964	\$188,446	\$194,028
Liquidity Ratios:					
Current Ratio	2.05	1.83	2.32	3.43	2.32
Working Capital	\$91,979	\$76,657	\$76,097	\$135,689	\$112,488
Solvency Ratios:					
Debt/Asset Ratio	.30	.34	.33	.20	.28
Equity/Asset Ratio	.70	.66	.67	.80	.72
Debt/Asset Ratio	.43	.51	.49	.25	.41
Profitability Ratios:					
Rate of Return of Farm Assets	3.04%	3.92%	2.85%	1.64%	3.44%
Rate of Return on Farm Equity	0.95%	1.17%	0.69%	-0.19%	1.52%
Net Farm Income	\$38,429	\$43,034	\$35,212	\$38,311	\$41,037
Operating Profit Margin (VFP)	11.59%	15.87%	9.51%	6.72%	13.35%
Operating Profit Margin (GR)	7.93%	11.92%	6.28%	4.63%	8.80%
Operating Profit Margin (GFI)	10.31%	14.33%	9.03%	6.08%	11.35%

**TABLE 16. DERIVED FINANCIAL EFFICIENCY RATIOS FOR KANSAS CROP-BEEF FARMS, BY REGION AND STATE, 1991 TO 1996.**

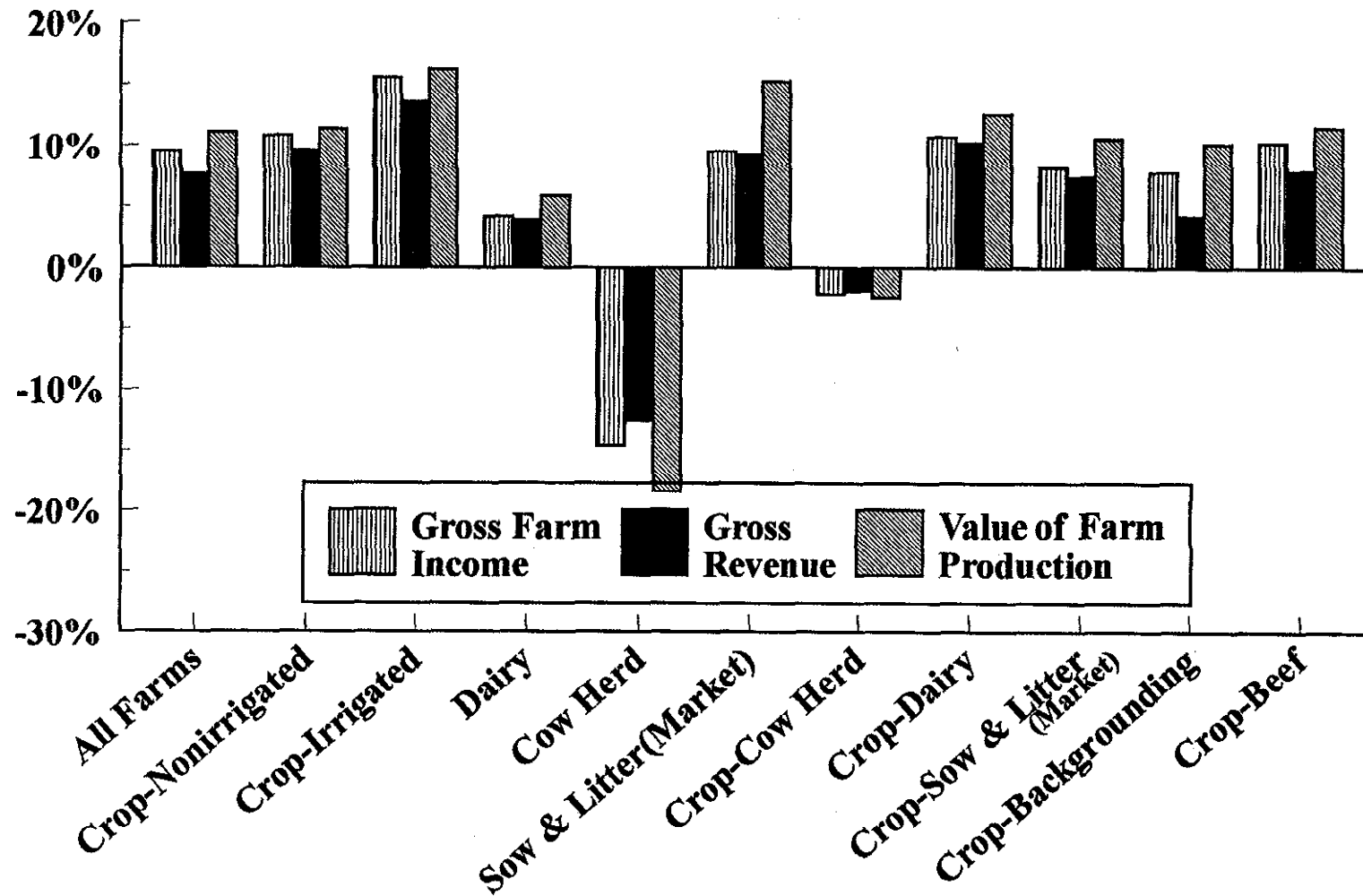
Variable	State	Northwest	North Central	Northeast	Southeast
Value of Farm Production:					
Asset Turnover Ratio	.25	.24	.27	.23	.25
Operating Expense Ratio	60.50%	59.45%	62.25%	62.61%	58.16%
Interest Expense Ratio	9.43%	11.09%	9.23%	7.81%	9.00%
Depreciation Expense Ratio	7.79%	7.98%	8.04%	7.24%	7.99%
Net Farm Income Ratio	22.28%	21.48%	23.01%	22.34%	24.85%
Gross Revenue:					
Asset Turnover Ratio	.38	.33	.41	.34	.40
Operating Expense Ratio	73.47%	70.09%	73.56%	74.41%	73.44%
Interest Expense Ratio	6.29%	8.01%	6.06%	5.33%	5.54%
Depreciation Expense Ratio	5.19%	5.79%	5.28%	4.94%	4.97%
Net Farm Income Ratio	15.04%	16.11%	15.10%	15.32%	16.06%
Gross Farm Income:					
Asset Turnover Ratio	.29	.27	.30	.25	.30
Operating Expense Ratio	65.01%	63.64%	63.90%	65.94%	64.52%
Interest Expense Ratio	8.31%	9.83%	8.12%	7.13%	7.59%
Depreciation Expense Ratio	6.88%	7.09%	7.14%	6.60%	6.74%
Net Farm Income Ratio	19.81%	19.44%	20.84%	20.33%	21.15%



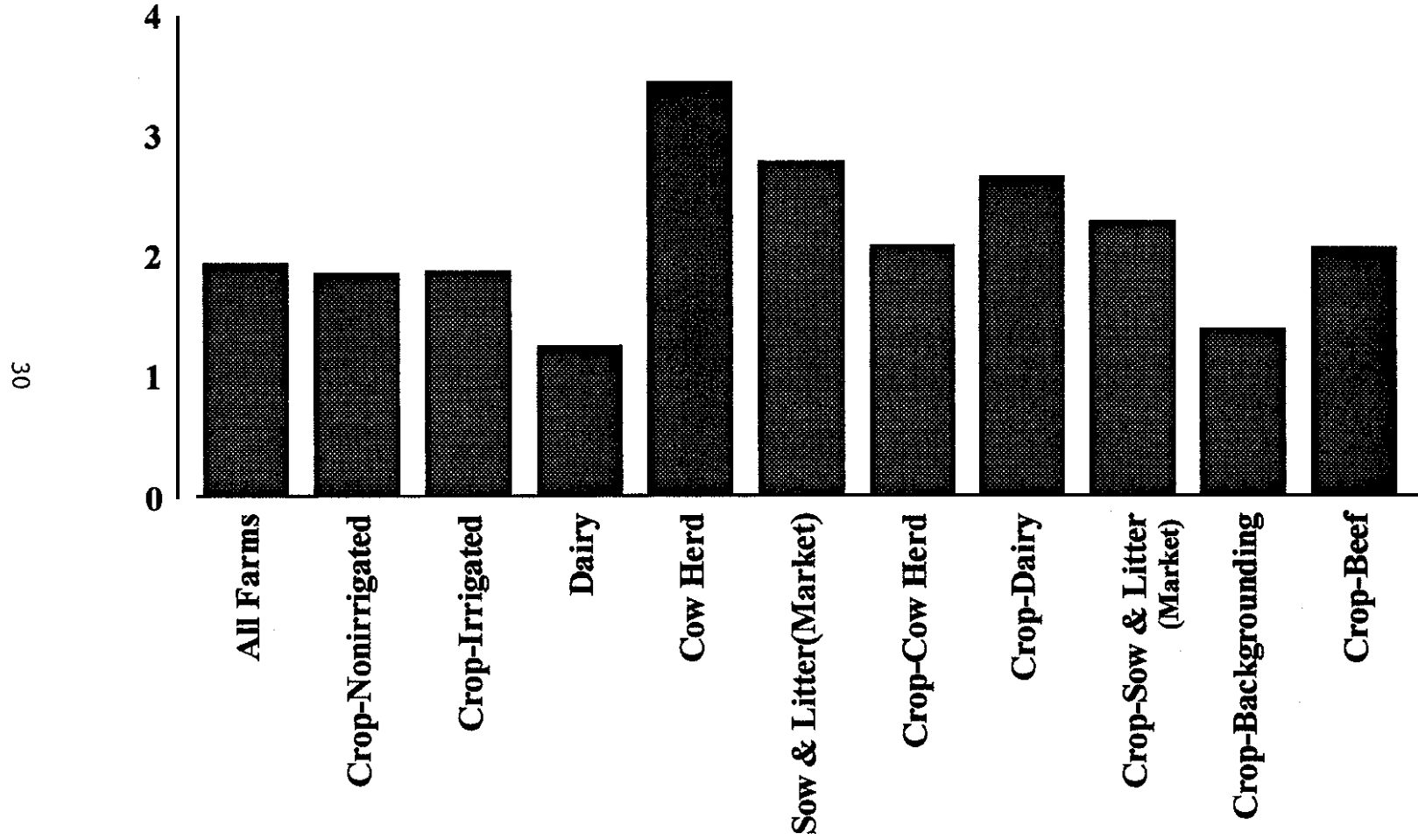
**Figure 1. Rate of Return to Farm Assets by Kansas Farm Type, State**



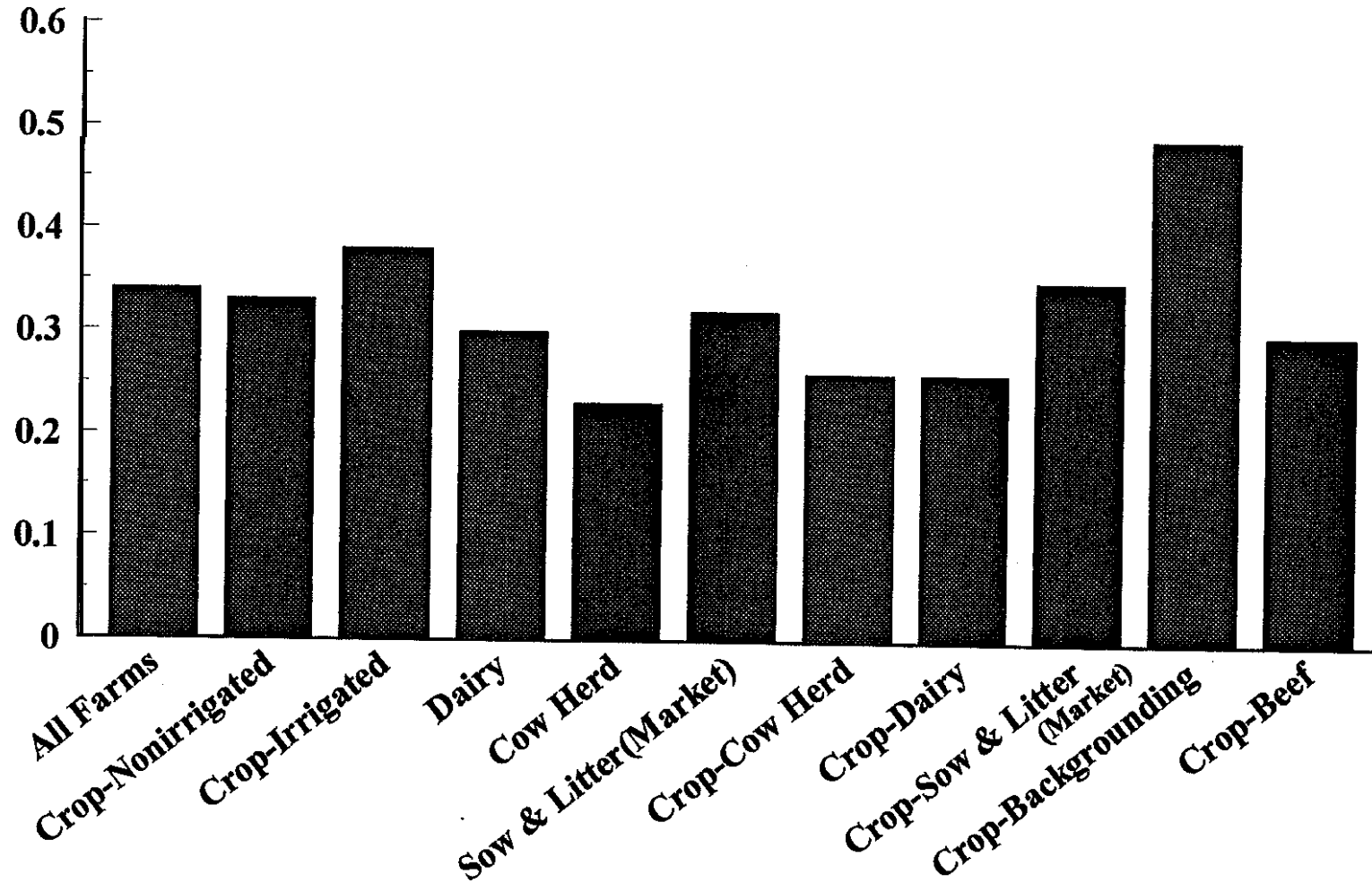
**Figure 2. Operating Profit Margin Ratio by Kansas Farm Type, State**



**Figure 3. Current Ratio by Kansas Farm Type, State**



**Figure 4. Debt to Asset Ratio by Kansas Farm Type, State**



**TABLE 17. BENCHMARK RANGES FOR SELECTED FINANCIAL MANAGEMENT RATIOS.\***

Ratio	Benchmark Range		
	Excellent	Good	Poor
Debt-to-Asset	<0.30	0.30 - 0.70	>0.70
Current	>1.25	0.75 - 1.25	<0.75
Operating Expense	<0.75	0.75 - 0.85	>0.85
Working Capital to Expenses	>0.50	0.20 - 0.50	<0.20
	Benchmark Value		
	Excellent-Good	Poor	
Equity-to-Asset	≥0.50	<0.50	
Debt-to-Equity	≤1.00	>1.00	

\*Source: David M. Kohl, Professor, Virginia Tech University, "Financial Analysis and Benchmarks for the late 90's," paper presented at the National Association of Farm Business Specialists Conference, Charleston, South Carolina, June, 1995.

**TABLE 18. SELECTED LIQUIDITY, SOLVENCY, PROFITABILITY, AND FINANCIAL EFFICIENCY RATIOS FOR VARIOUS KANSAS FARM TYPES, BY STATE, 1978 TO 1995.\***

Variable	Farm Type										
	State	Cow Herd	Sow & Litter (Market)	Crop-Dairy	Crop-Sow & Litter (Market)	Crop-Nonirrigated	Crop-Irrigated	Dairy	Crop-Cow Herd	Crop-Beef Backgrounding	Crop-Beef
Liquidity Ratios:											
Current Ratio	2.03	3.03	2.65	3.19	2.08	2.15	1.80	2.96	2.78	1.37	2.31
Solvency Ratios:											
Debt/Asset Ratio	.37	.32	.42	.35	.44	.36	.42	.37	.24	.48	.31
Profitability Ratios:											
Net Farm Income	\$23,132	\$8,663	\$38,986	\$38,099	\$22,443	\$22,373	\$33,179	\$33,604	\$14,421	\$19,081	\$23,505
Financial Efficiency (Gross Farm Income) Ratios:											
Asset Turnover Ratio	.33	.22	.65	.42	.46	.32	.42	.49	.18	.32	.25
Operating Expense Ratio	64.72%	67.79%	75.00%	67.07%	68.76%	60.85%	65.78%	68.88%	63.68%	67.45%	62.52%
Interest Expense Ratio	10.86%	14.42%	6.58%	7.69%	9.66%	10.65%	9.53%	7.56%	13.47%	14.83%	12.23%
Depreciation Expense Ratio	10.65%	11.38%	7.39%	11.15%	10.54%	12.10%	11.37%	8.68%	10.85%	9.22%	11.12%
Net Farm Income Ratio	13.86%	6.41%	11.03%	16.09%	11.04%	16.23%	13.33%	14.88%	12.00%	8.51%	14.12%

\*Source: Ann H. Durkes, "Financial Ratio Analysis of Kansas Farms: Liquidity, Solvency, Profitability, and Financial Efficiency," Unpublished M.S. Thesis, July, 1998.

**Appendix Table 1. Balance Sheet, Income, and Cash Flow Financial Statements for Example Farm  
John P. Recorder  
Balance Sheet (Farm Business Only)**

	Beg. Invent. <u>1/1/98</u>	Ending Invent. <u>12/31/98</u>
<b><u>ASSETS</u></b>		
Cash on Hand	\$ 0	\$
0		
Cash on Deposit in Bank	31,000	31,140
Marketable Securities	0	0
Market Livestock	184,050	232,650
Crops Held for Sale and Feed	37,500	17,980
Fertilizer and Supplies on Hand	11,100	7,625
Accounts Receivable	9,500	10,000
Prepaid Expenses	0	0
Cash Investment in Growing Crops	8,250	9,000
Other Current Assets (List)	1,400	645
<b>TOTAL CURRENT ASSETS</b>	<b>\$282,800</b>	<b>\$309,040</b>
Breeding Livestock (Market)	25,200	25,500
Auto-Trucks (Market)	15,000	13,520
Motorized Equipment (Market)	73,000	70,700
Machinery and Equipment (Market)	39,800	37,605
Investments in Capital Leases	0	0
Investments in Other Entities	6,000	6,000
Investments in Cooperatives	18,000	18,000
Real Estate (Market)	189,300	198,750
Building-Improvements (Market)	85,000	104,950
Other Assets (List)		
<b>TOTAL NONCURRENT ASSETS</b>	<b>\$451,300</b>	<b>\$475,025</b>
<b>TOTAL ASSETS</b>	<b>\$734,100</b>	<b>\$784,065</b>
<b><u>LIABILITIES</u></b>		
Accounts Payable	0	0
Notes Due within One Year	125,100	118,975
Current Portion of Term Debt Due within 12 Months	9,000	11,125
Accrued Interest	5,000	8,500
Income Taxes Payable	3,200	3,200
Current Portion-Deferred Taxes	58,755	55,910
Other Accrued Expenses	8,000	4,000
Other Current Liabilities (List)		
<b>TOTAL CURRENT LIABILITIES</b>	<b>\$209,055</b>	<b>\$201,710</b>
Noncurrent Portion - - Notes Payable	12,900	20,790
Noncurrent Portion - - Real Estate Debt	63,500	83,025
Noncurrent Portion - - Deferred Taxes	68,160	71,275
Other Noncurrent Liabilities		
<b>TOTAL NONCURRENT LIABILITIES</b>	<b>\$144,560</b>	<b>\$175,090</b>
<b>TOTAL LIABILITIES</b>	<b>\$353,615</b>	<b>\$376,800</b>
Retained Capital	259,295	280,160
Valuation Equity	121,190	127,105
<b><u>OWNER EQUITY</u></b>	<b>\$380,485</b>	<b>\$407,265</b>
<b>TOTAL LIABILITIES AND OWNER EQUITY</b>	<b>\$734,100</b>	<b>\$784,065</b>



**John P. Recorder**  
**VFP Income Statement (Farm Business Only)**  
**January 1, 1998 to December 31, 1998**

**Farm Business Receipts**

Crop Cash Sales	\$ 35,870	
+ Ending Crop Inventory	17,980	
- Beginning Crop Inventory	37,500	
GROSS REVENUES FROM CROPS		\$ 16,350
Market Livestock Cash Sales	343,100	
+ Ending Market Livestock Inventory	232,650	
- Beginning Market Livestock Inventory	184,050	
GROSS REVENUES FROM MARKET LIVESTOCK		\$ 391,700
Gain/Loss From Breeding Livestock Sales and Quantity		
Change in Raised Breeding Livestock	1,950	
Agr. Program Payments	3,100	
Crop Insurance Proceed	5,500	
Other Farm Income	2,000	
Accrued Income Inventory Adjustment	500	
GROSS REVENUES		\$421,500
Less Purchase of Market Livestock	124,000	
Less Cost of Purchased Feed/Grain	130,000	
VALUE OF FARM PRODUCTION		\$167,500

**Farm Business Expenses**

Labor Hired	\$ 18,200	
Machinery-Building Repairs	9,400	
Seed-Other Crop Expense	3,100	
Fertilizer-Lime	7,000	
Machine Hire-Lease	2,400	
Farm Org. Fees, Publications	1,500	
Vet-Medicine-Drugs	3,900	
Livestock Marketing	4,600	
Gasoline-Fuel-Oil	10,000	
Real and Personal Property Taxes	2,500	
General Farm Insurance	2,200	
Cash Farm Rent	7,800	
Utilities	4,800	
Herbicides-Insecticides	4,000	
Conservation	500	
TOTAL CASH OPERATING EXPENSES		\$ 81,900
Accrued Expense Inventory Adjustment	(4,000)	
Production Supply Expense Inventory Adjustment	3,475	
Total Depreciation Expense	22,425	
TOTAL OPERATING EXPENSES		\$103,800
Total Accrued Interest Expense	16,600	
TOTAL EXPENSES		\$120,400
NET FARM INCOME FROM OPERATIONS		\$ 47,100
Gain/Loss on Sale of Farm Capital Assets	0	
Gain/Loss from Change in the Base Value-For Raised Breeding Livestock	0	
NET FARM INCOME, ACCRUAL ADJUSTED		\$ 47,100

**John P. Recorder**  
**Gross Revenues Income Statement (Farm Business Only)**  
**January 1, 1998 to December 31, 1998**

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**Farm Business Receipts**

Crop Cash Sales	\$ 35,870	
+ Ending Crop Inventory	17,980	
- Beginning Crop Inventory	37,500	
GROSS REVENUE FROM CROPS		\$ 16,350
Market Livestock Cash Sales	343,100	
+ Ending Market Livestock Inventory	232,650	
- Beginning Market Livestock Inventory	184,050	
GROSS REVENUES FROM MARKET LIVESTOCK		\$391,700
Gain/Loss From Breeding Livestock Sales and Quantity		
Change in Raised Breeding Livestock	1,950	
Agr. Program Payments	3,100	
Crop Insurance Proceeds	5,500	
Other Farm Income	2,000	
Accrued Income Inventory Adjustment	500	
GROSS REVENUES		\$421,500

**Farm Business Expenses**

Labor Hired	\$ 18,200	
Machinery-Buildings Repairs	9,400	
Seed-Other Crop Expense	3,100	
Fertilizer-Lime	7,000	
Machine Hire-Lease	2,400	
Farm Org. Fees, Publications	1,500	
Vet-Medicine-Drugs	3,900	
Livestock Marketing	4,600	
Gasoline-Fuel-Oil	10,000	
Real and Personal Property Taxes	2,500	
General Farm Insurance	2,200	
Cash Farm Rent	7,800	
Utilities	4,800	
Herbicides-Insecticides	4,000	
Conservation	500	
TOTAL CASH OPERATING EXPENSES		\$ 81,900
Purchase of Market Livestock/Products	124,000	
Cost of Purchased Feed/Grain	130,000	
Accrued Expense Inventory Adjustment	(4,000)	
Production Supply Expense Inventory Adjustment	3,475	
Total Depreciation Expense	22,425	
TOTAL OPERATING EXPENSES		\$357,800
Total Accrued Interest Expense	16,600	
TOTAL EXPENSES		\$374,400
NET FARM INCOME FROM OPERATIONS		\$ 47,100
Gain/Loss on Sale of Farm Capital Assets	0	
Gain/Loss from Change in the Base Value-For Raised Breeding Livestock	0	
NET FARM INCOME, ACCRUAL ADJUSTED		\$ 47,100

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**John P. Recorder**  
**Gross Farm Income Statement (Farm Business Only)**  
**January 1, 1998 to December 31, 1998**

<b>Farm Business Receipts</b>		
Crop Cash Sales	\$ 35,870	
+ Ending Crop Inventory	17,980	
- Beginning Crop Inventory	37,500	
GROSS REVENUES FROM CROPS		\$ 16,350
Marketing Livestock Cash Sales	343,100	
+ Ending Market Livestock Inventory	232,650	
- Beginning Market Livestock Inventory	184,050	
- Purchase of Market Livestock	124,000	
GROSS REVENUES FROM MARKET LIVESTOCK		\$267,700
Gain/Loss From Breeding Livestock Sales and Quantity		
Change in Raised Breeding Livestock	1,950	
Agr. Program Payments	3,100	
Crop Insurance Proceeds	5,500	
Other Farm Income	2,000	
Accrued Income Inventory Adjustment	500	
GROSS FARM INCOME		\$297,500
<b>Farm Business Expenses</b>		
Labor Hired	\$ 18,200	
Machinery-Building Repairs	9,400	
Seed-Other Crop Expense	3,100	
Fertilizer-Lime	7,000	
Machine Hire-Lease	2,400	
Farm Org. Fees, Publications	1,500	
Vet-Medicine-Drugs	3,900	
Livestock Marketing	4,600	
Gasoline-Fuel-Oil	10,000	
Real and Personal Property Taxes	2,500	
General Farm Insurance	2,200	
Cash Farm Rent	7,800	
Utilities	4,800	
Herbicides-Insecticides	4,000	
Conservation	500	
TOTAL CASH OPERATING EXPENSES		\$ 81,900
Cost of Purchased Feed/Grain	130,000	
Accrued Expense Inventory Adjustment	(4,000)	
Production Supply Expense Inventory Adjustment	3,475	
Total Depreciation Expense	22,425	
TOTAL OPERATING EXPENSES		\$233,800
Total Accrued Interest Expense	16,600	
TOTAL EXPENSES		\$250,400
NET FARM INCOME FROM OPERATIONS		\$ 47,100
Gain/Loss on Sale of Farm Capital Assets	0	
Gain/Loss from Change in the Base Value-For Raised Breeding Livestock	0	
NET FARM INCOME, ACCRUAL ADJUSTED		\$ 47,100

**John P. Recorder**  
**Cash Flow Statement - Projected**  
**1998**

**Cash Flow**

Livestock: Market Cattle	\$157,100	
Market Hogs-Sows	191,250	
Crops: Wheat-Grain Sorghum	35,870	
Patronage Dividends	400	
Agr. Program Payments	3,100	
Crop Insurance Proceeds	5,500	
Other Farm Income	2,015	
<b>TOTAL FARM CASH INFLOW</b>		<b>\$395,235</b>
Nonfarm Business Income and Wages	5,100	
Nonfarm Dividends and Interest	1,060	
<b>TOTAL CASH INFLOW (Except Loans)</b>		<b>\$401,395</b>

**Cash Outflow**

Labor Hired	\$ 18,200	
Machinery-Building Repairs	9,400	
Seed-Other Crop Expense	3,100	
Fertilizer-Lime	7,000	
Machine Hire-Lease	2,400	
Farm Org. Fees, Publications	1,500	
Vet-Medicine-Drugs	3,900	
Livestock Marketing	4,600	
Gasoline-Fuel-Oil	10,000	
Real and Personal Property Taxes	2,500	
General Farm Insurance	2,200	
Cash Farm Rent	7,800	
Utilities	4,800	
Herbicides-Insecticides	4,000	
Conservation	500	
<b>TOTAL FARM CASH OPERATING EXPENSES</b>		<b>\$ 81,900</b>
Interest Paid	13,100	
Feed Purchased	130,000	
Livestock Purchases	125,600	
Machinery, Equip. (Cash Payments, Principal)	1,925	
Buildings (Cash Payments, Principal)	4,000	
Land (Cash Payments, Principal)	5,200	
<b>TOTAL FARM CASH OUTFLOW</b>		<b>\$361,725</b>
Family Living Expenses	27,060	
State Income Tax	1,230	
Federal Income Tax and Social Security	5,580	
Nonfarm Business Expense	450	
Other Nonfarm Expense	850	
<b>TOTAL CASH OUTFLOW</b>		<b>\$396,895</b>
(Except Operating Loan Payments)		
<b>NET CASH FLOW</b>		<b>\$ 4,500</b>

**Appendix Table 2. Computation of Financial Ratios, Example Farm.\***

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**LIQUIDITY:**

**CURRENT RATIO**-----

Computation: Total Current Farm Assets ÷ Total Current Farm Liabilities

Example Data: \$309,040 ÷ \$201,710 = 1.53 (1.53:1)

**WORKING CAPITAL**-----

Computation: Total Current Farm Assets - Total Current Farm Liabilities

Example Data: \$309,040 - \$201,710 = \$107,330

**SOLVENCY:**

**DEBT/ASSET RATIO**-----

Computation: Total Farm Liabilities ÷ Total Farm Assets

Example Data: \$376,800 ÷ \$784,065 = 0.4806 (48.06%)

**EQUITY/ASSET RATIO**-----

Computation: Total Farm Equity ÷ Total Farm Assets

Example Data: \$407,265 ÷ \$784,065 = 0.5194 (51.94%)

**DEBT/EQUITY RATIO**-----

Computation: Total Farm Liabilities ÷ Total Farm Equity

Example Data: \$376,800 ÷ \$407,265 = 0.95 (0.95:1)

**PROFITABILITY:**

**RATE OF RETURN ON FARM ASSETS\*\***-----

Computation: ((Net farm income + interest expense - value of operator and unpaid family labor and management) ÷ Average total farm assets) x 100

Example Data: ((\$47,100 + \$16,600 - \$30,000) ÷ \$759,083) x 100 = 4.44%

**RATE OF RETURN ON FARM EQUITY\*\***-----

Computation: ((Net farm income - value of operator and unpaid family labor and management) ÷ Average total farm equity) x 100

Example Data: ((\$47,100 - \$30,000) ÷ \$393,875) x 100 = 4.34%

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\*Liquidity and solvency ratios computed as of December 31.

\*\*Value of operator labor and management set equal to \$30,000; or approximately the value of family living expenses.

**Appendix Table 3. Computation of Financial Ratios for Value of Farm Production Version; Example Farm.**

---

**PROFITABILITY:**

**OPERATING PROFIT MARGIN RATIO\***-----

Computation:  $((\text{Net farm income} + \text{interest expense} - \text{value of operator and unpaid family labor and management}) \div \text{Value of farm production}) \times 100$

Example Data:  $((\$47,100 + \$16,600 - \$30,000) \div \$167,500) \times 100 = 20.12\%$

**FINANCIAL EFFICIENCY:**

**ASSET TURNOVER RATIO**-----

Computation:  $\text{Value of farm production} \div \text{Average total farm assets}$

Example Data:  $\$167,500 \div \$759,083 = 0.22$  (0.22:1)

**OPERATING EXPENSE RATIO**-----

Computation:  $((\text{Operating expense} - \text{depreciation expense}) \div \text{Value of farm production}) \times 100$

Example Data:  $((\$103,800 - \$22,425) \div \$167,500) \times 100 = 48.58\%$

**DEPRECIATION EXPENSE RATIO**-----

Computation:  $(\text{Depreciation expense} \div \text{Value of farm production}) \times 100$

Example Data:  $(\$22,425 \div \$167,500) \times 100 = 13.39\%$

**INTEREST EXPENSE RATIO**-----

Computation:  $(\text{Interest expense} \div \text{Value of farm production}) \times 100$

Example Data:  $(\$16,600 \div \$167,500) \times 100 = 9.91\%$

**NET FARM INCOME FROM OPERATIONS RATIO**-----

Computation:  $(\text{Net farm income} \div \text{Value of farm production}) \times 100$

Example Data:  $(\$47,100 \div \$167,500) \times 100 = 28.12\%$

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\*Value of operator labor and management set equal to \$30,000; or approximately the value of family living expenses.

**Appendix Table 4. Computation of Financial Ratios for Gross Revenue Version; Example Farm.**

---

**PROFITABILITY:**

**OPERATING PROFIT MARGIN RATIO\***-----

Computation:  $((\text{Net farm income} + \text{interest expense} - \text{value of operator and unpaid family labor and management}) \div \text{Gross revenue}) \times 100$

Example Data:  $((\$47,100 + \$16,600 - \$30,000) \div \$421,500) \times 100 = 8.00\%$

**FINANCIAL EFFICIENCY:**

**ASSET TURNOVER RATIO**-----

Computation:  $\text{Gross revenue} \div \text{Average total farm assets}$

Example Data:  $\$421,500 \div \$759,083 = 0.56$  (0.56:1)

**OPERATING EXPENSE RATIO**-----

Computation:  $((\text{Operating expense} - \text{depreciation expense}) \div \text{Gross revenue}) \times 100$

Example Data:  $((\$357,800 - \$22,425) \div \$421,500) \times 100 = 79.57\%$

**DEPRECIATION EXPENSE RATIO**-----

Computation:  $(\text{Depreciation expense} \div \text{Gross revenue}) \times 100$

Example Data:  $(\$22,425 \div \$421,500) \times 100 = 5.32\%$

**INTEREST EXPENSE RATIO**-----

Computation:  $(\text{Interest expense} \div \text{Gross revenue}) \times 100$

Example Data:  $(\$16,600 \div \$421,500) \times 100 = 3.94\%$

**NET FARM INCOME FROM OPERATIONS RATIO**-----

Computation:  $(\text{Net farm income} \div \text{Gross revenue}) \times 100$

Example Data:  $(\$47,100 \div \$421,500) \times 100 = 11.17\%$

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\*Value of operator labor and management set equal to \$30,000; or approximately the value of family living expenses.

**Appendix Table 5. Computation of Financial Ratios for Gross Farm Income Version; Example Farm.**

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**PROFITABILITY:**

**OPERATING PROFIT MARGIN RATIO\***-----

Computation:  $((\text{Net farm income} + \text{interest expense} - \text{value of operator and unpaid family labor and management}) \div \text{Gross farm income}) \times 100$

Example Data:  $((\$47,100 + \$16,600 - \$30,000) \div \$297,500) \times 100 = 11.33\%$

**FINANCIAL EFFICIENCY:**

**ASSET TURNOVER RATIO**-----

Computation:  $\text{Gross farm income} \div \text{Average total farm assets}$

Example Data:  $\$297,500 \div \$759,083 = 0.39$  (0.39:1)

**OPERATING EXPENSE RATIO**-----

Computation:  $((\text{Operating expense} - \text{depreciation expense}) \div \text{Gross farm income}) \times 100$

Example Data:  $((\$233,800 - \$22,425) \div \$297,500) \times 100 = 71.05\%$

**DEPRECIATION EXPENSE RATIO**-----

Computation:  $(\text{Depreciation expense} \div \text{Gross farm income}) \times 100$

Example Data:  $(\$22,425 \div 297,500) \times 100 = 7.54\%$

**INTEREST EXPENSE RATIO**-----

Computation:  $(\text{Interest expense} \div \text{Gross farm income}) \times 100$

Example Data:  $(\$16,600 \div \$297,500) \times 100 = 5.58\%$

**NET FARM INCOME FROM OPERATIONS RATIO**-----

Computation:  $(\text{Net farm income} \div \text{Gross farm income}) \times 100$

Example Data:  $(\$47,100 \div \$297,500) \times 100 = 15.83\%$

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\*Value of operator labor and management set equal to \$30,000; or approximately the value of family living expenses.



Kansas State University Agricultural Experiment Station and Cooperative Extension Service, Manhattan 66506

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