

Farm Business Management Junior Problem Solving Formulas

Common Ratios and Financial Indicators	Formula
Compound Interest	$A = P(1 + \{r/n\})^{\{nt\}}$ <p> A - final amount P - principal balance r - interest rate n - # of times interest applied per time period t - # of time periods elapsed </p>
Simple Interest	$I = Prt$
Current Ratio	Current Assets ÷ Current Liabilities
Working Capital	Current Assets – Current Liabilities
Debt-to-Equity Ratio	Total Liabilities ÷ Net Worth
Debt-to-Asset Ratio	Total Liabilities ÷ Total Assets
Equity-to-Asset Ratio	Equity ÷ Total Assets
Net worth or Equity	Total Assets – Total Liabilities
Rate of Return on Assets (ROA)	$(\text{Net Farm Income} + \text{Interest Expense} - \text{Unpaid Labor}) \div (\text{Average Value of Assets})$
Rate of Return on Equity (ROE)	$(\text{Net Farm Income} - \text{Unpaid Labor}) \div (\text{Average Value of Equity})$
Asset Turnover Ratio	$\text{Total Revenue} \div (\text{Average Value of Assets})$
Return to Management	Net Farm Income - Unpaid Labor - Opportunity cost of farm equity
Net Farm Income from Operations Ratio	Net Farm Income ÷ Gross Revenue
Debt Structure Ratio	Current Liabilities ÷ Total Liabilities
Operating Profit Margin Ratio	$(\text{Net Farm Income} + \text{Interest} - \text{Opportunity Cost of Unpaid Labor} - \text{Opportunity Cost of Management}) \div \text{Total Revenue}$
Value of Farm Production	Sum of livestock, crop, and other income computed on an accrual basis minus purchased feed.