



Heart of the Farm

Financial Management Factsheet Series

Understanding Profitability Using the Balance Sheet and Income Statement

How are Balance Sheet and Income Statement information
used to measure profitability?

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Profitability is the difference between the value of the goods produced by the farm business and the associated costs for producing them. The Farm Financial Standards Council (FFSC) measures profitability by evaluating the Net Farm Income (NFI) and several ratios and benchmarks them to the farming industry. The ratios include Rate of Return on Farm Assets (ROA), Rate of Return on Farm Equity (ROE) and the Operating Profit Margin (OPM) Ratio. Figures used in these ratios are derived from the Balance Sheet and Income Statement.

Parts I and II of Understanding the Farm Income Statement series discuss NFIFO and NFI calculations. Net Farm Income from Operations (NFIFO) measures the farm's profitability for a typical farming year as it accounts for adjusted income and expenses including depreciation. While NFIFO reflects the profitability of the farm operation, it does not include the sale or purchase of capital assets, which are considered extraordinary events in a typical year. NFI remains after the changes to capital assets are recognized.

NFI represents the income generated by the farm for that year. Part of this income is returned to labor and management. The part of this income, not used for labor and management, increases the farm's net worth. To remain viable, the business itself must grow its net worth.

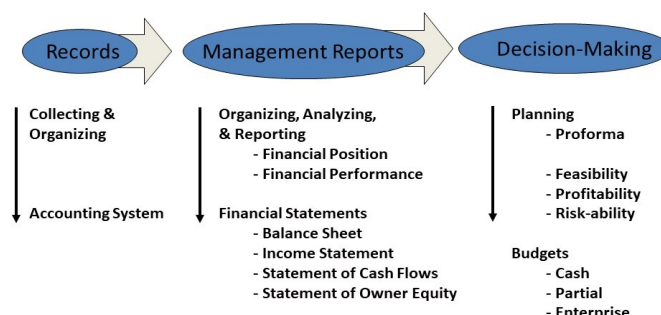
The NFIFO and NFI are often the first measures of profit that the owner/operator looks for, as they show the return to the resources (management, unpaid labor and capital) that they invested in the farm. But a deeper analysis allowing for comparison with peers, evaluation of trends and improvement over time, and evaluation for potential growth requires the calculations of the FFSC profitability ratios. These ratios consider the financial rate of return

to the owner and creditors' investments in the farm; is this rate of return comparable to investments in other business entities?

The Rate of Return on Farm Assets (ROA) looks at the rate of return to the total farm assets. **ROA is calculated as (NFIFO + Farm Interest Expense – Unpaid Labor and Management) / Average Total of Farm Assets.**

The NFIFO and interest expenses can be found on the Income Statement while Total Assets can be found on the Balance Sheet. Unpaid labor and management is typically not reported in the financial statements. These fees represent the value of the labor and management that was provided by the operator and family and for which no wages have been paid.

Farm Business Financial Management Model



Putting a value on unpaid labor and management is always difficult because it is hard to quantify and value. To get an estimate of unpaid labor and management ask yourself the question "What could I have earned if I had been working elsewhere?" The answer would be the salary of your next best employment alternative.

A farm is more profitable when ROA is more positive; a negative ROA would mean that the farm is unprofitable. Should the ROA be lower than the interest rate paid on debt, it would imply that the farm is paying more interest on borrowed funds than it is making by investing those borrowed funds in farm assets. In other words, the farm would be losing money on every dollar borrowed. In the end, this would seriously limit the capacity of the farm to build equity to support its growth. A more positive ROA is a sign of good financial performance.

The Rate of Return on Farm Equity (ROE) looks only at the rate of return to the owner's equity. **ROE is calculated as (NFIFO – Unpaid Labor and Management) / Average Total Farm Equity.** The calculation uses much of the same information as for the ROA, except for the Total Equity, which is found on the Balance Sheet.

We want ROE to be more positive, indicating that the equity of the owner is growing. Growth in equity represents growth in your retirement funds and a greater capacity to

finance farm expansion. If ROE is low, you may have to ask whether your farm, as it stands, can support your retirement and/or expansion plans. Can you make appropriate changes to increase your ROE or would you be better off investing that equity in something other than the farm?

Operating Profit Margin Ratio (OPM) is calculated as (NFIFO + Farm Interest Expense – Unpaid Labor and Management) /Gross Revenue. OPM is a measure of profitability and is determined based on information from the Income Statement and indicates how efficient the farm business is.

OPM is measured as a percentage; **Efficient and profitable farms have a larger OPM. Lower OPM Ratios indicate a weakness and/or higher input costs.** OPM can be lower on farms where most assets (e.g. land) are rented. As with the ROA and ROE, this ratio may be benchmarked with that of other farms.

A low OPM is usually due to having high cost of production per unit, or a farm receiving lower price for its

product. Thus, a low OPM points at either cost control and production efficiency issues, and/or price and marketing issues. Looking at specific cost items such as feed cost per hundredweight or crop production cost per unit and/or average price received to that of other farms, could help identify issues more specifically.

Summary

When added to NFIFO and NFI, the ROA, ROE and OPM ratios provide a more complete picture of the farm performance. Together they allow for a more detailed analysis and understanding that can help troubleshoot the financial problems of your farm. Note that your ROA and ROE could be low or negative even if your NFIFO is positive and the farm has enough cash to pay the bills. ROA and ROE are often seen as better measures of the ability of the farm to remain afloat and to generate the resources needed to fund retirement and/or expansion plans.

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The Heart of the Farm – Women in Agriculture program addresses the needs of farm women and men by providing education on pertinent topics, connecting them with agricultural resources, and creating support networks. <http://fyi.uwex.edu/heartofthefarm>

For other farm financial information and resources contact: Center for Dairy Profitability, <http://cdp.wisc.edu>

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