# Introduction to Financial Systems and Analysis

Whether starting a new farm business, managing a business, or thinking about a farm business expansion, financial management is critical for the development and maintenance of a financially healthy operation. Good information systems allow you to know where you are financially, evaluate your flexibility in absorbing shocks and plan for the future. Financial management is not simply recording expenses, revenues, assets and liabilities. It is a collection of data and information. The moment you realize that the easier it will be to commit to a financial management routine. In this publication, we introduce the four financial statements that farm managers use to record and assess farm performance and methods to analyze information from these records.

At the fundamental level, setting up your financial management system consists of keeping track of all your money-based transactions and recording them in a way that you can easily access, analyze and interpret them. A complete farm financial system consists of the **balance sheet, income statement, cash flow statement and owner's equity statement.** Preparation of each statement requires access to data at every level of farm activity that translates to expenses, revenues and investments. This includes production, marketing, financial, labor and legal. Some examples are sources of farm income, costs for each enterprise, equipment and buildings, supplies, costs of certification, insurance, and tax records.

A key component in financial record management is time. The time you collect data, record the data in appropriate statements, and the period each statement covers in most cases aligns with activities at the farm. The key is to establish a routine from which you do not deviate. The start of this process is establishing an accounting period. First, you pick a date to start your accounting period, in many cases January 1. This is the date you prepare your beginning balance sheet. The accounting period is one year, so December 31 is the date the ending balance sheet is prepared. The income statement and statement of cash flows will record the activities within that accounting year.

## Financial Statements

A **balance sheet** is a systematic record of the business's assets and debts (liabilities) at a specific point in time. Assets and liabilities are classified in terms of liquidity, meaning how easily they can be liquidated into cash. More liquid assets include cash, savings, accounts receivables listed first (current assets) and machinery, lodging and land listed in noncurrent assets. Similarly, debts that need to be paid within the year (current liabilities) are listed before intermediate or long-term debt (noncurrent liabilities).

The balance sheet is prepared twice, at the beginning and the ending of the accounting period, and provides valuable information to assess and compare the annual net worth (assets-liabilities) of the business. Also, it gives information on **liquidity** and **solvency**. Liquidity is defined as the ability to meet obligations as they come due (current assets - current liabilities). Solvency is defined as the ability to meet long-term financial obligations (total assets - total liabilities).

The balance sheet helps you answer the following questions:
1. Do I have enough money to pay operating expenses?
2. Do I have enough money to pay long-term expenses and fixed costs?
3. Am I building up equity for my business?

The **income statement** or **profit and loss statement** is a summary of the revenues and expenses of the farm business during the accounting period. Think of the income statement as a measure of input and output in dollar values. The income statement is divided in two parts, one recording revenues and the other expenses. Accrual adjustments are made to both parts.

The income statement is commonly prepared once. It provides information on **net farm income**, calculated as total adjusted income minus total adjusted expenses plus gain (or loss) of capital assets. Adjustments include crop changes, accounts receivable, prepaid expenses, accounts payable and accrued interest.

The income statement helps you answer the following questions:
1. How much did your business earn last year?
2. Did you experience profits or losses?

**Statement of cash flows** is a summary of all cash receipts and cash expenditures during the accounting year. Its purpose should not be confused with that of net farm income, which captures profitability. Think of the statement of cash flows as a record of sources and uses of cash. There are three main components of the statement of cash flows: cash flow from operating activities, cash flow from financing activities and cash flow from investment activities. A statement of cash flows can be constructed every month to determine the need of funds and the sources of these funds. Net change in cash and the ending cash balance are key items of the statement.

Questions you can answer with the statement of cash flows include:
1. To what extent is the operation able to generate enough cash to cover all cash obligations?
2. Are you making investments that will lead to stronger cash flow, or are you selling off productive assets to cover short-term obligations?
3. During the accounting year, were you able to pay down principal balances on farm loans or did you take on more debt?
4. After paying operating expenses, family expenses, making scheduled debt payments and paying income taxes, do you have enough cash to put money aside or invest in much-improvements?

The **statement of owner's equity** is based on information you report on the balance sheet. It reconciles the change of net worth during the accounting period. Its purpose is to calculate the value of the operation after all claims to creditors are subtracted from the asset value. There are two main components of the statement: the change in retained earnings and contributed capital and the change in market valuation.

## Financial Analysis

To measure and monitor the financial performance of your business, simply keeping good financial statements will not do. Financial tools allow you to extract more information from your records. The choice of tools depends on the information you need. Do you want to check how you fared compared to last year's information? Do you want to compare to another operation? It also varies by how specific you want to get. Do you want to check your solvency? Are you interested in checking whether your investments added value to your operation? The primary tools of financial analysis are listed below.

**Comparative financial statements**. You compare statements from one period to another by calculating the difference of each item. You can use this tool for year-to-year analysis or current year versus historic values. The difference can be reported in dollar values or in percentage terms.

**Common-size financial statements.** You compare each item on a financial statement relative to a total value for a category, i.e., a common denominator. For example, on a common-size balance sheet the common denominator is total assets (how much cash you own relative to total assets or the portion of cash of your total assets). On a common-size income statement, the common denominator is net sales or value of farm production. Common-size financial statements report information in percentage terms.

**Ratio analysis**. Financial ratios allow you to evaluate the performance and progress of your operation. Think of these performance measures as screening devices, indicating areas of potential strength and weakness, as well as revealing matters that need further attention. The use of ratios in (agricultural) finance has been standardized and is preferred when comparing one firm to another within the same industry or similar industries.

There are five main categories of ratios: **liquidity, solvency, activity, profitability and efficiency**. When relying on ratios to monitor your business it is important to look at a number of them and have ratios from more than one category, otherwise you may reach to wrong conclusions. Remember that ratios depend on financial statements and these financial statements are just some indicators.

## For more information:


Financial Management in Agriculture by Barry ad Ellinger. 7th ed. Prentice Hall.

Fearless Farm Finances by Padgham, Chase, and Dietmann. Midwest Organic and Sustainable Education Services

Farm Management by Kay and Edwards. 3rd ed. New York: McGraw-Hill.


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