Universidad de Puerto Rico
Colegio de Ciencias Agrícolas
Recinto Universitario de Mayagüez

FINANCIAL ANALYSIS: UNDERSTANDING RECORD INFORMATION FOR DECISION MAKING

Prepared by:
Dra. Alexandra Gregory
Professor
Email: alexandra.gregory@upr.edu

Department of Agricultural Economics and Rural Sociology

Presented in November 2025

"This material is based upon work supported by USDA/NIFA under Award Number 2015-49200-24228."

Para más información visitar: https://sites.google.com/upr.edu/mercadeoagricolapr/home

Objectives

- Understand the reasons for keeping accounting records
- Calculate the ratios to analyze the financial situation

Accounting Records

- Cash Flow
- Income and Expense Sheet
- Inventory
- Balance Sheet

The material from this workshop is used to evaluate the company's financial status; it is not for tax purposes.

Cash Flow

- It is the summary of the company's cash transactions; it explains the changes in cash and where they occur.
  It summarizes operating activities, investing activities, and financing activities over a period of time.

Income Statement

- The Income Statement presents every income and expense transaction, whether monetary or non-monetary, generated by the business. Income is defined as what is received in return for the good or service offered and includes all income, whether or not it is in cash. It also includes government subsidies and non-monetary resources that generate some type of income. Expenses are defined as the cost incurred by making or using an input in the production of a good or service.

Inventory

- The foundation of any business is the purchase and sale of goods or services. Inventory is the list of all the company’s possessions and includes all debts.
- Inventory is used to account for the goods the company acquires, which helps maintain control and understand its financial situation.
- It provides information about the equipment, machinery, materials, and inputs that the agricultural entrepreneur has available in their business.
- One of the most important uses of inventory is that it provides information for purchasing the equipment and materials needed to continue the production process.

Uses of Inventory

- Know the goods we have on the farm
- Serves as evidence for assistance in disaster situations
- Together with liabilities, it shows the true financial situation
- Essential for filing tax reports
- A control tool
- Allows you to determine which and how many items need to be restocked
- Helps plan when to restock inventory
- Allows for more efficient management of perishable materials
- Required when applying for loans

Balance Sheet

- The main objective of any business is to maximize profits.
- A company's profits are not measured only by Net Income; there are other measures used to determine whether a business is successful or not.
- The Balance Sheet is the summary of the Inventory.

Inventory Items

- ASSETS
  - Current
  - Intermediate
  - Fixed
- LIABILITIES
  - Current
  - Intermediate
  - Fixed

ASSETS

Current Assets

- They include materials or products that are ready for sale, meaning all merchandise a company has in storage, valued at acquisition cost, for sale or productive activities.
- In other words, these are the assets used in the production process or kept on the farm with the purpose of converting them into cash, selling them, or consuming them within a short period of time.

Examples of Current Assets

- This includes cash on hand or in the bank, accounts expected to be collected in one year or less, and goods that can be converted into cash in a short period of time. Other examples include deposits, livestock for fattening, animal feed, pesticides, products for sale, cash, fertilizers, and medications.

Intermediate Assets

- These are assets that support the production process but are not used up or sold within one year, and are not attached to the land.

Example of Current Assets

- Machinery and Equipment
- Tools
- Breeding anf producing animals

Fixed Assets

- These are assets that support the production process but are not used up or sold within one year, and are attached to the land.

LIABILITIES

Liabilities

- **Current:** These are debts that are due within one year or less, or during the accounting period.
  Intermediate: These are debts that are due in less than 7 years.
  Fixed: These are debts that are due in more than 7 years.

Mathematical Reasoning

- **Which is greater: 1/2 or 1/3?
- When a fraction's denominator increases, the result becomes smaller.
- Which is greater: 1,000/2 or 1,000/10?**

Estimates That Use the Balance Sheet

Liquidity

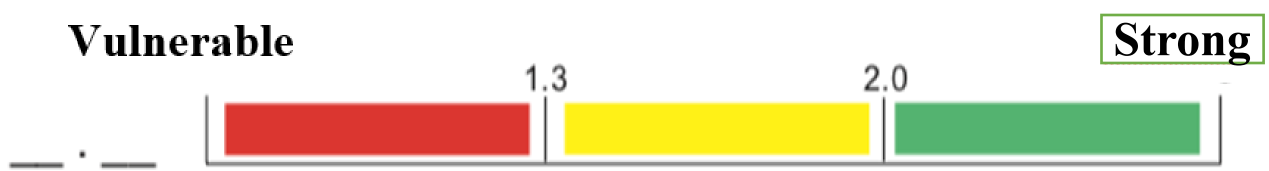
- It is the agricultural business's ability to meet its financial obligations as they become due.
- It is the ability to generate enough cash to pay household expenses and taxes, and to make debt payments on time.

1. Current Ratio
2. Working Capital
3. Working Capital to Gross Revenues Ratio

Current Ratio

- It measures the extent to which the farm's current assets, if sold tomorrow, could cover the farm's current liabilities.

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



Working Capital

- It indicates the short-term operating capital available to the business.

$$\text{Working Capital} = \text{Current Assets} - \text{Current Liabilities}$$

Working Capital to Gross Revenues

- It measures the working capital available in comparison to the size of the business.

$$\text{Working Capital to Gross Revenues Ratio} = \frac{\text{Working Capital}}{\text{Gross Revenues}}$$

____%

Solvency

- It is the business's ability to pay all its debts if it were sold tomorrow. Solvency is important for evaluating financial risk and the company's repayment capacity when seeking loans.

4. Farm Debt-to-Asset Ratio
5. Farm Equity-to-Asset Ratio
6. Farm Debt-to-Equity Ratio

Farm Debt-to-Asset Ratio

- It is the portion of the business that belongs to the bank. It compares the farm’s total debt with its total assets. A high ratio indicates high financial risk and lower borrowing capacity.

$$\text{Debt-to-Asset-Ratio} = \frac{\text{Total Liabilities}}{\text{Total Assets}}$$

____%

Farm Equity-to-Asset Ratio

- It is the portion of the business that belongs to you. It compares the farm's Equity with the farm's Total Assets. If you add the debt-to-asset ratio and the equity-to-asset ratio, you should get 100%.

$$Equity - to - \mathrm{Asset} - \mathrm{Ratio} = \frac{\mathrm{Net\ Worth}}{\mathrm{Total\ Assets}}$$

$$\mathrm{Owners\ Equity} = \mathrm{Total\ Assets} - \mathrm{Total\ Liabilities}$$

____%

Net Worth is also known as Equity Value or Owner's Equity.

Farm Debt-to-Equity Ratio

- It compares the portion that belongs to the bank with the portion that belongs to the entrepreneur. It also indicates how much the owners have used (or leveraged) the equity of their business.

$$\text{Debt} - \text{to} - \text{Equity} - \text{Ratio} = \frac{\mathit{Total\ Liabilites}}{\mathit{Net\ Worth}}$$

$$\text{Owners Equity} = \text{Total Assets} - \text{Total Liabilities}$$

__ . __

Net Worth is also known as Owner’s Equity.

Practice Exercise

Dra. Alexandra Gregory Crespo
Professor
Department of Agricultural Economics and Rural Sociology
Email: alexandra.gregory@upr.edu

September 2nd, 2018