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Farm Financial Risk Management: Introduction to Farm Financial Statements for New and Beginning Farmers

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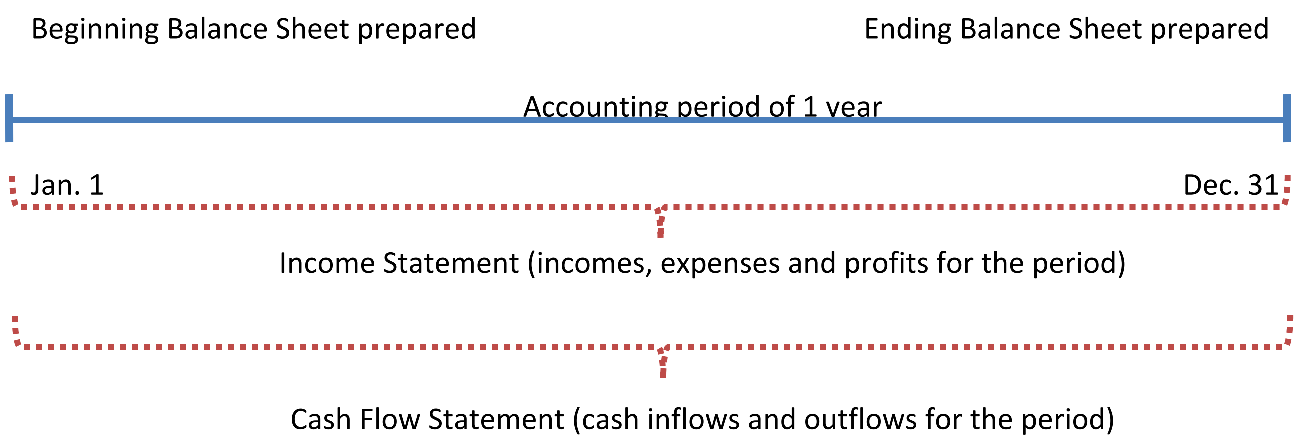
There are many factors to consider before you start a new farm enterprise. Financial management is an important component in the start-up and decision-making process for beginning farmers. The purpose of this resource is to introduce you to the farm financial system and steps to create a balance sheet, cash flow statement, income statement, and the owner's equity statement. The topics covered in this risk management resource are not all-inclusive, but after reading this tool, you should be prepared to move forward in planning for your farm. If you have any questions about this particular risk management issue or other farm start-up topics, bring them to your local Virginia Cooperative Extension office, or visit the Virginia Beginning Farmer and Rancher Coalition Program website at: www.vabeginningfarmer.org

Farm Financial Statements

A complete farm financial system is comprised of a set of financial statements and planning budgets. The four financial statements used to record financial details include a balance sheet (or net worth statement), cash flow statement, income statement, and the owner's equity statement. Preparation of each statement requires access to detailed data on farm enterprises, production methods, sources of farm revenue, costs for each enterprise, equipment and facility conditions, inventory of supplies, sources off-farm income, and insurance and tax records. While the effort required to compile these records may initially require several hours of time, it is important to note that this information will used to build both the financial statements and the planning budgets. The purpose of this paper is to introduce the four financial statements that farm managers may use to record and assess historical farm financial performance.

A key component to each of these four financial statements is the time frame within which each piece of farm data is collected and entered into the financial system. In general, most financial statements are prepared annually and include farm records from the previous calendar year. Each statement provides a mathematical record that demonstrates the farm operation's ability to meet both short and long-term financial goals. When constructing your farm financial statements, consider using a timeline (Fig. 1) to focus attention to the time measurement noted within each statement. The balance sheet, or net worth and owner's equity statements, present two annual portraits of the farm financial standing on the first and last days of the year. The income statement portrays video evidence of farm revenues and expenses as recorded throughout the year. The cash flow statement includes monthly pictures of the farm checking account balances. Taken together, these four statements provide the manager with information on changes in the farm financial situation at varying levels of detail.

Figure 1. Farm Financial Statement Construction Timeline



Balance Sheet – What is it and how does it help me?

A balance sheet is a systematic listing of all a business owns (assets), and all that it owes (liabilities) at a specific point in time, and is also referred to as a net worth statement. Completion of the balance sheet provides answers to three critical questions facing farm managers and owners: what do you own? What do you owe? And what's the difference? Armed with this information, the farm manager can use balance sheet to assess and compare the annual net worth of the farm business from its initial establishment through to the end of the previous year.

The balance sheet includes a classification of each of the farm's assets, according to their liquidity, or, the firm's capacity to generate cash quickly and efficiently to meet its financial commitment as they fall due. The balance sheet is typically constructed at the beginning and the end of each calendar year. Therefore, the balance sheet serves as a "snapshot in time" at each of these two points in the lifetime of the business.

What do you OWN?

Current farm assets include all items whose values will likely be realized in cash or used up during the normal course of business each year, and include:

- Checking accounts
- Notes and accounts receivable
- Hedging accounts with commodity brokers
- Prepaid expenses
- Market livestock
- Crops on hand that will be converted to cash during the operating cycle of business
- Supply inventories (feed, fertilizer, seed and other farm supplies)

Noncurrent farm assets are expected to yield services to the business over multiple years, and may include:

- Machinery & equipment
- Breeding livestock
- Buildings

- Other types of real estate
- Retirement accounts
- Water-handling facilities (irrigation, tile)
- Residence
- Various improvements, such as establishing orchards, controlling brush, add and repair fence, roads, ponds, etc.

What do you OWE?

Current farm liabilities are existing obligations that the farm is expected to pay in the next twelve months, and include:

- Accounts payable to merchants and supply companies
- Notes payable to lending institutions
- Accrued expenses: have been incurred but as a result of the statement date have not been paid, such as interest, taxes, rent and lease payments
- Current portion of all term debt: amount of principle on all term debt due within next twelve months

Noncurrent liabilities are farm business obligations that have a maturity greater than twelve months, and include noncurrent portion of notes payable on real estate and non-real estate farm assets.

What's the difference?

Once completed, balance sheets allow farm owners and managers to determine the overall farm net worth, also called the owner's equity, simply calculate the difference between total farm assets and liabilities. More details on the Statement of Owner's Equity are provided in the next section of the paper.

How does a balance sheet help you?

In addition to determining the overall farm net worth at the beginning and ending of the accounting period, the information on a farm balance sheet can be used by farm managers to determine the short and long term capacity of the business to receive loans and make the payments. Liquidity of the farm is defined as the ability to meet obligations as they come due in the short term. Farm business liquidity is calculated as the difference between current assets and liabilities. For example, if a liquidity problem is discovered, farm managers many chose to address this financial risk in one or more of the following ways:

- refinance current debt to secure lower payments
- slow farm expansion until liabilities are reduced
- reduce overall annual operating debt
- liquidate farm assets and use the cash to pay down debts
- reduce annual costs of operating the farm business
- improve overall farm profitability by increasing yields, reducing expenses, or finding new market offering higher prices

Solvency of the farm is defined as the ability to meet long-term financial obligations and cover fixed expenses. Farm business solvency is calculated as the difference between total assets and liabilities.

Using the relationship between total assets and liabilities over different points in time provides farm managers with the information needed to achieve long term growth and profitability goals. For example, if a solvency problem is discovered, farm managers many chose to address this financial risk in one or more of the following ways:

- retain additional net farm income in upcoming years
- reduce overall debt owed by the farm business
- sell farm assets to reduce debt
- improve overall farm profitability by increasing yields, reducing expenses, or finding new markets offering higher prices

Income Statement – What is it and how does it help me?

An income statement is a summary of the revenue (receipts or income) and expenditures (costs) of the farm business over a specified period of time. The income statement is also called a profit and loss statement. The purpose of the income statement is to measure the difference between farm revenues and operating expenses incurred over a period of time and allow for direct calculation of net farm income. Construction of the income statement allows farm owners and managers to answer another key financial risk management question – Did the business demonstrate a net income that was positive (farm earned a profit) or negative (farm lost money) last year, and, how large was it? Income statements are typically constructed at the end of each operating period, and represent revenues, expenses, and net income incurred as a result of undertaking farm operations. Therefore, the income statement demonstrates the “bottom line” of the farm business over a specific time period.

What did you EARN last year?

The first components listed on the income statement are farm revenue streams. Revenues are calculated by multiplying the number of units sold by the price received per unit by each enterprise during the previous accounting period. Farm revenues may be recorded in any of the following forms:

- Cash: dollars earned from every commodity produced and sold
- Noncash: inventory produced that is not yet not sold, and, any accounts receivable due to the farm
- Gain or loss on sale of capital assets
- Non-farm adjustments, i.e., off-farm income, custom work, government payments, etc.

What did you SPEND last year?

The second component listed on the income statement is farm expenses, which include all expenses incurred from operations carried out on the farm during an accounting period. Farm expenses are calculated by multiplying the price of the input by the number of units of the input used during farm operations. Expenses may be recorded in any of the following forms:

- Cash: dollars spent on feed, seed, fertilizer, fuel, market livestock purchases, farm labor, insurance premiums, veterinary bills, etc.
- Noncash: depreciation, accounts payable, accrued interest, accrued expenses (property taxes), and adjustments for prepaid expenses

It is important to note that principal payments on loans are not included as an expense on the farm income statement, as the loan principal is NOT considered an expense.

How does an income statement help you?

Income statements serve as a starting point for analyzing profitability of the business over a specific time period, as the data included on the form is used to show whether the farm business had a profit or loss last year. Calculation of *net farm income from operations* is found by subtracting total expenses from total farm revenues earned during the prior accounting period (typically a calendar year). Calculation of *net farm income* is found by subtracting any gains or losses resulting from sales of capital assets from net farm income from operations.

If the income statement reveals the farm earned positive net farm income over the time period, the farm owner or manager has the opportunity to use these profits to fund one or more of the following:

- Pay family living expenses and other needed cash withdrawals
- Pay income and social security taxes
- Increase farm cash reserves or purchase needed farm assets
- Reduce farm liabilities through payment of loan principle balances or other accounts payable

Statement of Cash Flows - What is it and how does it help me?

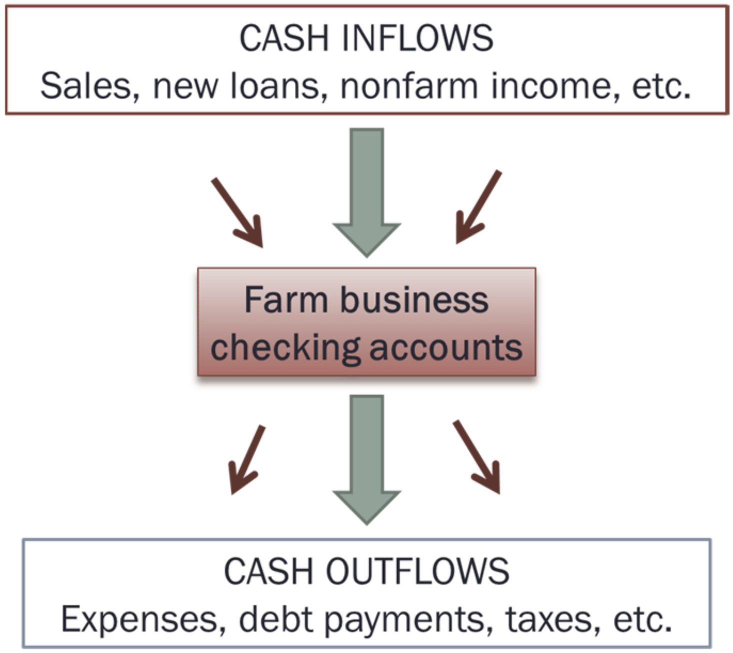
A statement of cash flows is a listing of cash flows that occurred during the previous accounting period. The purpose of the cash flow statement is to show how cash entered and exited the business. Construction of the statement of cash flows allows the farm manager to follow the amounts and timings of cash movement in and out of farm checking and savings accounts (Fig. 2). The statement of cash flow is typically constructed at the end of each operating period, and uses and reorders the information from the balance sheet and income statement. The statement of cash flow demonstrates the net increase or decrease in cash over a specific time period.

Components of the statement of cash flow include the following:

- Cash from operating activities: farm income and expenses
- Cash from investing activities: farm sales or purchases of assets
- Cash from financing activities: new borrowed capital, loans received, principal repayment, gifts and/or inheritances received

Nonfarm income and expenses (in cases where the business is classified as a sole proprietor) and beginning and ending cash on hand may also be included on the statement of cash flows. However, it is important to note that depreciation is not included at this is considered a NONCASH expense.

Figure 2. Statement of Cash Flows for Farm Business



How does a cash flow statement help you?

In agriculture, cash flows are typically inconsistent as costs are incurred at the beginning and throughout the production season and revenues are received only at the time of harvest or market sales. Often, a farm business can be profitable (according to the income statement) and still have several months with negative cash flow. It is important to recognize that a statement of cash flows does not show overall farm profitability, and demonstrates the need to complete all four financial statements to manage farm finances.

A key financial risk management strategy utilized by farm managers is to construct a monthly statement of cash flows to determine when and where funds are needed to meet repayment obligations of the business in the short, intermediate and long terms. Also, farm managers may take advantage of periods of positive cash flows to obtain discounts on input purchases by using the information in the cash flow statement to plan ahead. Finally, farm owners may benefit in tax planning by identifying and taking advantage of income tax benefits resulting from better timing of purchases, sales, and capital expenditures.

Statement of Owner's Equity - What is it and how does it help me?

A statement of owner's equity reconciles owner's equity (or farm net worth) stated at the beginning time period with the owner's equity remaining at the ending time period. The purpose of the statement of owner's equity is to calculate the value of business after total claims of creditors are subtracted from the asset value. The term "owner equity" refers only to the farm business and this statement includes no information for an individual person. Construction of the statement of owner's equity allows the farm manager to determine which of the three components (contributed capital, retained earnings, market valuation) caused changes in the net worth of the farm business last year.

Like the balance sheet, the statement of owner's equity is typically constructed at the beginning and the end of each calendar year, and serves as a "snapshot in time" at each of these two points in the lifetime of the business.

Components of the statement of owner's equity include the following:

- Change in contributed capital: capital contributed to the business by its owner, such as any personal cash or property the owner used to start the business or has contributed since that time. The value of contributed capital should remain the same on any future balance sheets.
- Change in retained earnings: earnings or business profit that has been left in the business rather than withdrawn, such as any before-tax income not used for family living expenses, income taxes, or other purposes. Retained earnings are typically recorded in the form of additional assets (not always cash), decreased liabilities, or some combination of both. Retained earnings are expected to increase for any year where net farm income exceeds the combined total of income taxes paid and withdrawals for family living expenses.
- Change in market valuation: any change caused by fluctuations in market values when market valuation (rather than a cost basis) is used. If inflation is high, land market values may increase due to land ownership as opposed to resulting from farm production. Market valuation makes it easy to analyze what part of total equity is result of valuation differences.

For more information about preparing and analyzing farm financial statements in Virginia, please contact Dr. Kim Morgan at klmorgan@vt.edu or 540-231-3132. For more information and resources directly aimed at beginning farmers, please visit the Virginia Beginning Farmer and Rancher Coalition Program at www.vabeginningfarmer.org

The Virginia Beginning Farmer and Rancher Coalition Program (VBFRCP) is a state-wide and Coalition-based Extension Program. The program is housed in Virginia Tech's Department of Agricultural, Leadership, and Community Education and a program of Virginia Cooperative Extension. The VBFRCP is sponsored by the Southern Extension Risk Management Education Center and the Beginning Farmer and Rancher Development Program (BFRDP) of the USDA-National Institute of Food and Agriculture (NIFA), Award Number: 2015-70017-22887

SOUTHERN EXTENSION RISK MANAGEMENT EDUCATION

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