



Getting on Track:
*Better Management through
Basic Financial Statements*

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Provide a welcoming to Session Three.

Again, the objectives of the course are:

- Describe the purpose and characteristics of a “cash flow statement”
- Describe the purpose and characteristics of a “balance sheet”
- Describe the purpose and characteristics of an “income statement”
- Describe the purpose and characteristics of a “statement of owner equity”
- Understand the challenges and benefits of the four financial statements
- Learn how to create financial statements for your own business

So far, we have discussed:

- Cash flow statements
- Balance sheets

This session will last 60 minutes and will cover:

- Income statements
- Operating revenue
- Operating expenses
- Net cash operating income
- Personal consumption
- Inventories
- Capital assets

- Net farm income

Are We Profitable?

After three years of keeping balance sheets and cash flow statements, Jack and Joanie are wondering if the business is making a profit.



Jack and Joanie have kept cash flow statements and balance sheets of their business performance for the past three years. It seems as though the farm business is doing well, but they don't really know for sure.

Dad explains that the financial statement called an income statement is used to measure profitability. The income statement is created from information found in your cash flow statement and balance sheets.

Additional teaching point: Profit is revenues minus expenses.

What is an Income Statement?

- **An income statement:**
 - Lists the sources of farm revenues
 - Describes the nature of farm expenses
 - Calculates *Net Farm Income*
- **Multiple income statements can allow a farm manager to compare profitability to previous years and similar farm operations**
- **Also referred to as a *Profit and Loss Statement***



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An income statement calculates the profitability of a business over a specific period of time, usually one year.

It lists the sources of farm revenues, describes the nature of farm expenses, and calculates Net Farm Income.

The income statement allows the farm manager to compare profitability to previous years and similar farm operations.

Additional teaching point: Net Farm Income is the amount of revenue remaining after all expenses have been paid, including income tax.

Additional teaching point: Profit and Loss Statement is an accounting of revenues and expenses for a period of time for the purpose of calculating net income or net loss for the period (also called operating statement or income statement).

Cash vs. Accrual-Based Accounting

- **Cash Accounting:**
 - Measures income and expense items when the cash changes hands
- **Accrual Accounting:**
 - Matches the revenues from the period's production to the actual expenses associated with generating that revenue



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Dad explains that an income statement can be prepared based on either cash or accrual accounting methods.

Cash accounting measures income and expense items when the cash changes hands. Inventory changes and other non-cash transactions are ignored. It reflects the income of a business over time, but is not a true reflection of profitability. For example, if you bought \$1,000 of diesel fuel in December for your upcoming production year, on a cash basis you would record a \$1,000 expense in December.

Accrual accounting matches the revenues from the period's production to the actual expenses associated with generating that revenue. This method more accurately reflects the actual production and expense commitments made during the accounting period. For example, if you bought \$1,000 of diesel fuel in December for your upcoming production year, on an accrual basis you would record both the expense and an increase in inventory of fuel valued at \$1,000. These would offset each other and neither add to nor subtract from the overall profitability of the current production year.

Cash vs. Accrual-Based Accounting *(cont.)*

- **The Internal Revenue Service (IRS) allows agricultural businesses to file taxes using cash-based information**
- **Cash accounting allows more flexibility that may reduce or increase a business's tax liability for a particular year**



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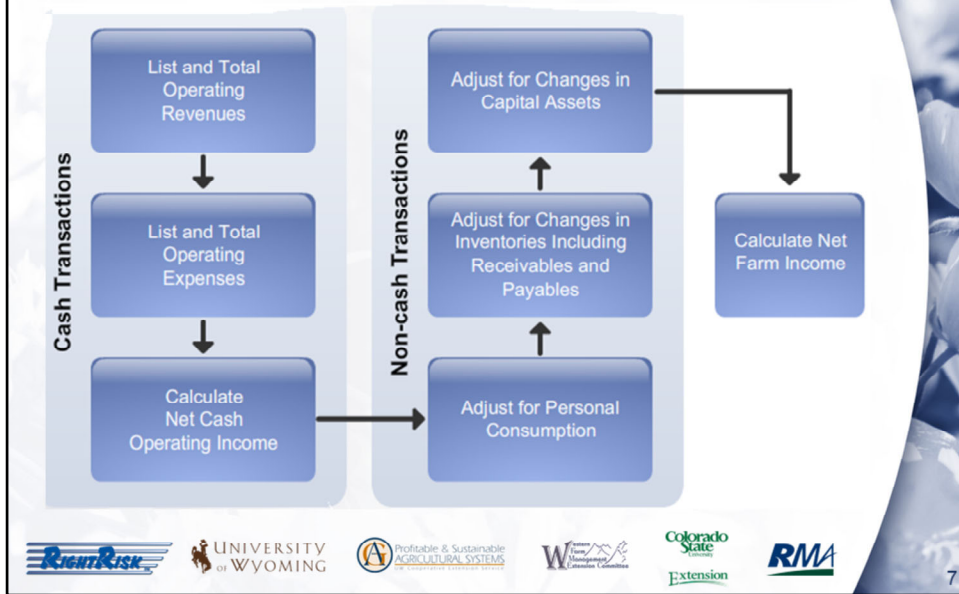
Jack asks, "If the accrual method is more accurate, why would you ever use the cash method?"

Dad's answer: The IRS allows agricultural businesses to file taxes using cash-based information. Cash accounting allows more flexibility that may lower a business's tax liability.

Jack asks, "Does that mean that our tax returns for the business are not a good measure of profitability?"

Dad's answer: That's right. That's why you should keep your own accrual-based income statement to track profitability.

How to Create an Income Statement



Dad explains that creating an income statement is a seven-step process.

In the first three steps you account for cash transactions reflected on the cash flow statement.

In steps four through six, you make adjustments for non-cash changes that occur within a reporting period.

The seventh step is to calculate the Net Farm Income.

Step 1: List and Total Operating Revenue

- **List and total all money received from sales of:**
 - Crops
 - Livestock
 - Livestock products
- **List all government payments, income from custom work and services, and any other sources of miscellaneous farm income**
- **Do not include cash inflows from loans**
- **The total of these revenues is called Gross Operating Revenue**



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Dad tells Jack to begin by listing and totaling the value of all the money received from sales of crops, livestock, and livestock products.

These values can be found on receipts from cash sales, invoices from items purchased for resale, tax forms such as the 1099 and K-1, and the cash flow statement.

Government payments and other miscellaneous sources of farm income should be recorded here, but cash inflows from loans should not be included.

The total of all these revenues is called Gross Operating Revenue.

Additional teaching moment: Read aloud the following explanation of Jack and Joanie's operating revenue. Print the Income Statement template off of the CD, and have the participants enter the amounts you read into the Revenue section of the income statement.

Jack pulls out his records from the previous year and records \$20,000 from flower sales, \$345 from the sale of lambs, and \$48 in wool sales.

Step 2: List and Total Operating Expenses

- **List and total all of the expenses of running the business, including:**
 - Crop and livestock inputs
 - Machine hire
 - Veterinary expenses
 - Supplies, fuel, repairs, etc.
- **The principal portion of debt payments should NOT be included**
- **The total is called Gross Operating Expenses**



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The next step is to list and total the value of all the money paid out to operate the business. This includes crop and livestock inputs, machine hire, veterinary expenses, supplies, fuel, and repairs to name a few.

These values can be found on receipts from cash purchases, invoices, sale tickets, bank statements, credit card statements, and the cash flow statement.

The principle portion of debt payments should not be included.

The total of all these is called Gross Operating Expenses.

Additional teaching moment: Again, read aloud the following explanation of Jack and Joanie's operating expenses. Have the participants enter the amounts you read into the Expenses section of the income statement.

Jack pulls out his records from the previous year and records the following expenses: \$3,294 for seeds and plants, \$558 for fertilizer and chemicals, \$1,120 for repairs and maintenance, \$1,340 for fuel and lube, \$630 for insurance, \$140 for interest on loans, \$1,850 for supplies, \$1,020 for utilities, \$250 for labor, \$100 for storage, \$196 for taxes, \$350 for marketing and vendor fees, \$60 for water, \$180 for sheep expenses, and \$442 for miscellaneous expenses.

Step 3: Calculate Net Cash Operating Income

- **Net Cash Operating Income:**
 - The result of total operating income minus total operating expenses
 - This value accounts for only cash transactions in a reporting period and does not include adjustments for non-cash activities



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Next, subtract gross operating expenses from gross operating revenues to calculate Net Cash Operating Income.

Additional teaching moment: Allow class time to calculate the net cash operating income.

In the remaining steps you will adjust this value to account for non-cash transactions, inventory changes, and changes in capital assets.

Step 4: Adjust for Personal Consumption

- **Adjust for personal consumption of farm products and personal use of business inputs and other items**
 - Examples: meat, eggs, milk, business inputs, and expenses
- **To accurately reflect actual income of the business, you must adjust for *Non-Cash Transactions***



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The first adjustment is for personal consumption of business items.

An example is when you use or consume a farm product that could have been sold.

The reason that you make this adjustment is because the value of household-consumed products represents production by the business and should be included to more accurately represent actual income.

In order to make this adjustment accurately you need to keep records of any farm products that your family consumes.

Examples of business items consumed or used for personal use:

- Meat, eggs, milk
- Business inputs (fuel, seed, fertilizer, etc.)
- Business expenses (utilities, insurance, leases, etc.)

Additional teaching point: Non-cash transactions are adjustments made to net cash income to account for personal consumption, inventory changes, and changes in capital asset values. These adjustments more accurately reflect the actual production and associated expense commitments during the accounting period.

Additional teaching moment: Read aloud the following explanation of Jack and Joanie's personal consumption. Have the participants enter the amounts you read into the Non-cash Income and Expenses area of the income statement.

Jack makes an adjustment of \$18 for flowers Joanie gave to her friends as gifts and \$325 dollars for two lambs the family consumed over the year.

Step 5: Adjust for Changes in Inventories (including Receivables and Payables)

- **Make a positive adjustment for:**
 - Products produced that haven't been sold
 - Money for products sold that has not been collected
- **Make a negative adjustment for:**
 - Supplies or inputs used that were paid for in a previous accounting period



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Another adjustment is to add or subtract for changes in inventories, including changes in receivables and payables. Some inventory examples include:

- Feed and grain
- Market livestock
- Accounts receivable
- Farm supplies
- Prepaid expenses (feed, fuel, fertilizers, chemicals, etc.)
- Accounts payable (production items charged, accrued rent, interest, taxes, etc.)

Make a positive adjustment for inventories and receivables that are higher at the end of the accounting period than they were at the beginning. Make a negative adjustment for inventories and receivables that are lower at the end of the accounting period than they were at the beginning.

Payables are handled differently. Beginning balances should be subtracted from ending values. These items could include bills or other obligations that have not yet been fully paid.

Sources of data for this information include balance sheet, inventory records, accounts payable and receivable, and sales and delivery agreements.

Additional teaching moment: Read aloud the following explanation of Jack and Joanie's inventory changes. Have the participants enter the amounts you read into the Inventory Changes section of the income statement.

Jack notes that he has 60 units of feed and grain at the end of the period. He had none at the

beginning. This requires a \$60 adjustment. He also records \$130 in accounts payable that is owed at the end of the period. At the beginning of the period he and Joanie had no outstanding bills to pay.

Step 6: Adjust for Changes in Capital Assets

- **Capital assets include both:**
 - Cash transactions
 - Depreciation
- **Data sources for this adjustment information:**
 - Balance sheet
 - Purchase and sale contracts for capital assets
 - Depreciation schedules used for income tax computations
 - Cash flow statements



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The last adjustment is for changes in capital assets. A capital asset is an item that benefits the farm business on an ongoing basis and has a useful life greater than one year. These adjustments include both cash transactions, such as the purchase and sale of capital assets, and depreciation, which is a non-cash transaction.

Recall that depreciation refers to an asset's decrease in value as a result of its age, use, and obsolescence. This depreciation becomes a production expense. We discussed straight line depreciation in the Balance Sheet lesson, which allocates the cost of the asset evenly across all of the years of the asset's useful life. Other methods for calculating depreciation may better match costs with the specific pattern as an asset wears out over time.

Additional teaching point: Capital Assets provide a flow of service that is consumed in production over a period of more than one year. They include buildings, fencing, machinery, equipment, breeding stock, orchards, etc. These represent an asset that is not easily sold in the regular course of a business's operations for cash and are generally owned for their role in contributing to the business's ability to generate profit.

Additional teaching moment: Read aloud the following explanation of Jack and Joanie's capital assets changes. Have the participants enter the amounts you read into the Capital Assets section of the income statement.

Jack records differences in the value of his breeding livestock inventory, machinery and equipment, and buildings on the property. He records the value of the breeding livestock as \$545 at the beginning of the period and \$436 at the end. Jack values his machinery and equipment at \$8,500 at the beginning of the period and adjusts the value to \$7,285 at the end of the period to account

for depreciation. Likewise, he reduces the value of the buildings from \$1,395 at the beginning of the period to \$998.

Step 7: Calculate Net Farm Income

	Net Cash Operating Income
+/-	Adjustment for Household Consumption
+/-	Inventory changes, including receivables and payables
+/-	Changes in capital assets
=	Net Farm Income



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The last step of creating an income statement is to calculate Net Farm Income.

Use the formula shown on the slide.

Additional teaching moment: Allow the class time to calculate the Net Farm Income.

Print off the Income Statement Sample on the CD and compare it to the ones created by the class.

Ask: Did Jack and Joanie make a profit during the reporting period? (Yes. A positive net farm income indicates that the business made a profit.)

Quiz Time!

Which of the following are uses for an income statement?

1. Determines the profitability of the business
2. Determines the cash value of the business
3. Determines the tax liability of the business



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The next few slides contain quiz questions for the class. Allow for responses.

Answer:

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Quiz Time!

Indicate the proper order of the steps listed to create an income statement:

- Adjust for inventory changes, including payables and receivables
- Calculate Net Farm Income
- List and total all operating revenue
- Calculate Net Cash Operating Income
- Adjust for changes in capital assets
- Adjust for the value of personal consumption
- List and total all operating expenses



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The next few slides contain quiz questions for the class. Allow for responses.

Answer:

The bullets are listed in this step order: 5, 7, 1, 3, 6, 4, 2

Quiz Time!

Which types of income statements should a farm manager develop, update, and analyze to accurately measure profitability?

1. A cash-basis income statement
2. An accrual-basis income statement
3. Both a cash and accrual-basis income statement
4. None, income statements are generated by the IRS



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The next few slides contain quiz questions for the class. Allow for responses.

Answer:

2. Farm managers should create an accrual-basis income statement to accurately calculate and compare the profitability of their business from year to year.

Challenges and Benefits

- **Challenges:**

- Separating business from personal income and expenses can be difficult for family farms
- Making the accrual adjustments to accurately reflect net farm income can be time consuming, and requires detailed farm records



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Creating and maintaining an income statement presents both challenges and benefits to a business. Review the challenges listed on the slide.

Challenges and Benefits *(cont.)*

- **Benefits:**

- Measures farm profitability over a period of time
- Provides a detailed list of both revenues and expenses
- Provides an indicator of how well a producer manages capital for acquiring agricultural credit



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Creating and maintaining an income statement presents both challenges and benefits to a business. Review the benefits listed on the slide.

Homework

- **Create an accrual basis income statement for your business**



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You have finished Session Three!

Review the Homework on the screen, providing instruction for how the class can find the Income Statement Template and Instructions on the CD.

Allow for review debrief and any additional questions.