



# Preparing a cash flow statement

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# Table of contents

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|                         |       |    |
|-------------------------|-------|----|
| Introduction            | ..... | 1  |
| Video script            | ..... | 1  |
| References              | ..... | 9  |
| Exercise 1              | ..... | 10 |
| Exercise 2              | ..... | 12 |
| Ending<br>balance sheet | ..... | 14 |
| Income statement        | ..... | 16 |
| Work sheet              | ..... | 18 |
| Answer key 1            | ..... | 20 |
| Answer key 2            | ..... | 23 |

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## Cash flow statement

# Preparing a cash flow statement



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## Purpose

The purpose of this module is to help you:

1. understand how a cash flow statement can help analyze your farm or ranch business,
2. learn how preparing a cash flow statement can benefit you in at least five ways,
3. understand the structure and components of a cash flow statement,
4. practice preparing a cash flow statement,
5. become aware of some of the similarities and differences between a cash flow statement and an income statement,
6. learn how to deal with cash deficits and surpluses, and
7. learn about some special features of a cash flow statement and the tools that will help you prepare a cash flow statement.

## Videotape script

By Freddie L. Barnard

The key to financial success is maintaining a sound cash flow. Clearly, a business that can't meet its financial obligations in a timely manner is a business in trouble. Perhaps the single most important tool a manager has for identifying and controlling cash flow is the cash flow statement.

A cash flow statement summarizes all cash inflows and outflows affecting a business during a given period of time such as a month, quarter or year. The key word in that definition is *cash*. We don't include non-cash items in a cash flow statement.

A cash flow statement can be a statement of past performance or a budget for future plans. As a statement of

This is one module of the *Business Management in Agriculture* series and is intended to be used with its corresponding videotape. The script may vary from the actual videotape text.

past performance, a cash flow statement shows how and when cash was generated and used to pay for inputs and capital items, family living expenses and loan payment. As a budget of future plans, a cash flow statement is essential for evaluating your business's borrowing needs and repayment capacity.

A comprehensive cash flow projection forces you to think about and make tentative decisions on such key issues as what enterprises and production practices you'll use next year, how and when you will market commodities, what capital items you'll purchase and when you'll dispose of various capital items, and how you'll finance capital purchases and other outlays. A projected cash flow statement represents a blueprint for action and offers an opportunity to test ideas and decisions *on paper* before you implement them.

Both the income statement and cash flow statement represent a specified period of time. But the two statements differ in the treatment of several accounting entries. For example:

1. A complete cash flow statement includes non-farm or ranch business items such as income taxes and non-farm or ranch income. These items may be omitted from an income statement.
2. Cash withdrawals for such things as stock dividends and family living expenses are usually included in a cash flow statement. An income statement does not include family living expenses or dividends.
3. Cash flow analysis includes a more complete accounting of debt transactions by showing principal payments and proceeds of new loans. An income statement only shows interest payments.
4. A cash flow statement reflects such cash transactions as the purchase or sale of capital items such as breeding livestock, machinery and real estate. These items show up on an income statement as depreciation, or as a gain or loss from the disposal of farm assets.
5. An income statement prepared using accrual accounting includes inventory changes. A cash flow statement includes sales and purchases, but no adjustment for inventory changes.

## How to use a cash flow statement

Let's look at how you can use information from a cash flow statement.

In agriculture, cash inflows and outflows are not usually distributed evenly throughout the year. Some are in the form of lump sums, and some are steady flows. This causes cash deficits and surpluses. The objective of doing a projected cash flow statement is to not let the tank go completely dry.

### CASH FLOW STATEMENT CAN BE USED AS A:

- Statement of past performance
- Budget for future plans

### **CASH FLOW STATEMENT ENABLES FARMER/RANCHER TO:**

- Identify cash surpluses and deficits
- Analyze cash inflow and outflow
- Plan/project cash flow into the future
- Inform lenders of borrowing needs
- Plan repayment schedule
- Monitor cash flow variances

A projected cash flow statement helps you identify how much cash is coming into and going out of your business during a specified period of time. This enables you to identify the amount, time and duration of cash surpluses and shortfalls.

A cash flow statement helps you analyze how cash flowed into and out of your business. Consequently, it can help you identify areas where you can make adjustments to improve your cash position. This helps you plan for the future.

A cash flow statement for a past period can help you project a cash flow statement for a future period. Such a projection helps you manage cash flow and meet financial obligations on time. It helps you plan for future cash needs instead of reacting with crisis management.

However, if you expect to make changes in your operation, a cash flow statement for a past period is of limited use when preparing a cash flow statement for a future period. Changes in enterprises, production practices, input and commodity prices, and government programs would affect your future cash flow statement.

A projected cash flow statement is useful when you want to borrow money. It helps your lender understand your borrowing needs. It also helps your lender identify when and for how long you will need borrowed funds.

A projected cash flow statement helps you plan a repayment schedule for borrowed money. Of course, your lender is probably interested in this aspect of cash flow planning as well. But remember that the principal of intermediate and long-term loans must be paid out of net farm income. It is essential that your business be profitable over the long term. So don't forget the importance of a projected income statement when considering capital purchases.

Finally, one of the most useful applications of a cash flow statement is in monitoring cash flow variances. You monitor cash flow changes by comparing actual cash flows with projected cash flows on a monthly or quarterly basis during the year. Variances between the two indicate you need to make business adjustments or revise cash flow projections. Monitoring cash flow variances gives you an opportunity to resolve an emerging cash flow problem *before* it becomes a crisis.

### **Structure of a cash flow statement**

Perhaps the easiest way to visualize a cash flow statement is to think of a calendar. The columns represent time periods. The rows represent categories for cash inflows and outflows.

The first line on any cash flow statement is usually the **beginning cash balance**. This is cash that is available to you at the beginning of the period. If you are doing an annual cash flow statement, it is the cash available at the beginning of the year. If you are doing a monthly cash flow statement, it is the amount available at the beginning of each month. This is the same amount that was the ending cash balance for the previous period and is the money available for routine business transactions. It may be in a checking account, a "NOW" account, or it may be the cash kept in a bread box. But it is not the money in a savings account that is not *routinely* used to conduct business transactions.

The next section of a cash flow statement – operating receipts – is used to record cash inflows from business operations. This includes the sale of crops, livestock, livestock products, custom work and a variety of other sources, including cash payments from the government.

When entering this information onto a cash flow statement, record amounts (of cash) in the time period you received or expect to receive the cash. This may not be the same time as when you sold or plan to sell the product. Also, this amount is the *net* amount, or the total amount adjusted for selling charges, commissions, etc.

To help you accurately calculate the amount of cash you received or expect to receive, some cash flow statements include work sheets or schedules that make it easier to arrive at the amount that should be entered on the cash flow statement. Once the amount is calculated on the work sheet, it is transferred to the cash flow statement.

There is a place on most cash flow statements to record cash received from selling capital items such as breeding livestock, machinery and equipment. Again, it's important to record the net amount of cash you received or expect to receive when the money actually changes hands.

On many cash flow statements there is a place to record non-farm or non-ranch income. This income is usually not included on an income statement. However, it is a source of cash that flows into the business that should be included on a cash flow statement, especially if family living expenses are included as a cash outflow. Of course, if your farm business pays you a wage, and you use that wage to pay family living expenses, then you may choose to omit non-farm or ranch income and family living expenses from a cash flow statement.

If you total all four types of cash inflows for a specified period, you have the **total cash available** for that period.

Now let's look at expenses or cash outflows. The most obvious cash outflows are for operating expenses and include such things as fertilizer, seed, chemicals, fuel and livestock expenses. A cash flow statement enables you to estimate the amount of each of those expenses and record

### **CASH FLOW STATEMENT BEGINNING CASH BALANCE**

#### **Can be**

- Checking account
- NOW account
- Cash in a bread box

#### **Cannot be**

- Money in savings
- Account not routinely used to conduct business

## CASH FLOW STATEMENT

1. Operating expenses
  - Fertilizer
  - Seed
  - Chemicals
  - Fuel
  - Livestock expenses
  - Others
2. Livestock purchases
3. Feed purchases
4. Capital expenditures
  - Machinery
  - Equipment
  - Improvements

those amounts in the time period when you paid for or expect to pay for them. Just as with cash inflows, the time an expense is paid may not coincide with when the product is received.

Some cash flow statements separate livestock (both feeder and breeding) and feed purchases from other operating expenses. Whether or not you separate those expenses, they are still a cash outflow and should be recorded in the time period when you expect to pay them.

Amounts paid for capital items such as machinery, equipment and improvements are also included as cash outflows. One way to handle this kind of cash outflow is to record the total amount of money that will be paid to a dealer for a piece of machinery as a cash outflow and then record any cash received from a loan as a cash inflow. A second way to handle this transaction is to record, as a cash outflow, only the cash amount you must pay. Either way is correct, however the second way makes it difficult to relate the cash flow statement to the balance sheet and to the flow of funds for the business.

Other items that must be paid include family living expenses, non-farm business expenses and investments (provided cash receipts from those investments are included as cash inflows), and income and Social Security taxes. Interest and principal payments for intermediate and long-term loans are also cash outflows. Since these payments are usually scheduled in advance, they can be anticipated and recorded in the time period when they come due.

Totaling all cash outflows gives **total cash required** for the period. If you subtract total cash required from total cash available, you have the **cash position** at the end of the period.

That position can be positive or negative. During periods when there has been a large inflow of cash, such as when crops or livestock are sold, there is probably a positive cash position or surplus. However, when crop operating expenses are paid or feeder livestock are purchased, the cash required sometimes exceeds the amount available, which results in a negative position or a deficit.

## How do you handle deficits?

Deficits are bound to occur, even when your business is highly profitable. There are six ways you can manage deficits. First, you could raise additional cash. Second, you could reduce or postpone cash payments. Neither of these strategies is usually possible. You usually have already listed all cash inflows, and bills must be paid. Your third choice is to restructure debt to fit cash flow. Fourth, you could sell some intermediate or long-term assets to generate additional cash. However, that usually isn't feasible because

it could disrupt the normal operation of your business. Fifth, you can dig into your savings. That alternative may be available for some, but for others there are no savings. Finally, you could borrow money. Borrowing can take the form of an intermediate or long-term loan to help purchase an intermediate or long-term asset, or an operating loan to pay operating expenses.

What if you have a cash surplus? How do you handle that on a cash flow statement? You could pay off any outstanding debts. Debts might include an operating loan, intermediate or long-term loans, or accounts payable. Remember that you recorded your regularly scheduled loan payment in the expense section of the cash flow statement. If you don't owe any money or don't want to make a prepayment on any existing debt, you may want to save that extra money. This, of course, would be recorded as a cash outflow to a savings or investment instrument. You may also decide to reinvest any cash surplus back into your business.

The last line of the cash flow statement is the **ending cash balance**, the amount of cash your business has at the end of a period. This amount, then, is the same as the beginning cash balance for the next period.

Some cash flow statements include other features, such as lines to keep running totals of operating, intermediate and long-term loan balances, inventories, and savings and investment accounts. Some also include formulas for checking addition and subtraction, which are extremely useful when preparing a cash flow statement by hand.

## Frank Farmer's cash flow

Let's plug some numbers into a simple cash flow statement. We'll use numbers from Frank Farmer's operation to prepare a projected quarterly cash flow statement for the year 19X2.

You'll recall that Frank is a sole proprietor who owns a total of 80 acres, 60 of which are tillable (40 acres of corn and 20 acres of soybeans). He cash rents 300 acres (200 acres of corn and 100 acres of soybeans) and rents 240 acres (120 acres of corn and 120 acres of soybeans) on a fifty-fifty share lease.

In year 19X1 he had a total of 360 acres of corn and 240 acres of soybeans. He also sold 550 market hogs from a 40-sow farrow-to-finish hog operation. Frank works full time on the farm and has one full-time hired man.

Frank prepared cash flow statements each quarter during 19X1, so that he could compare actual cash transactions to what he had projected at the end of 19X0 for year 19X1. This allowed him to identify any deviations from what he projected and to take corrective action.

## DEALING WITH CASH DEFICITS

1. Increase cash receipts
2. Reduce cash expenses
3. Refinance debt
4. Sell intermediate-term or long-term assets
5. Utilize savings
6. Borrow money

## OTHER FEATURES OF CASH FLOW STATEMENTS

1. Running balances:
  - Operating loans
  - Intermediate loans
  - Long-term loans
  - Inventories
  - Savings accounts
  - Investment accounts
2. Computation formulas

## **CASH FLOW STATEMENT INFLOWS**

1. Beginning cash balance
2. Operating receipts
  - Crops
  - Livestock
3. Capital sales
4. Non-farm/ranch income

**Equals total cash available**

## **Frank's projected receipts**

We'll use information from Exercise 2 to complete the first quarter of Frank's projected cash flow statement for 19X2.

The beginning cash balance for Frank Farmer on January 1, 19X2, is \$9,660. This is the same amount as the ending cash balance for 19X1.

Projected operating receipts for the first quarter of 19X2 for Frank Farmer are from crop sales: corn (\$38,025) and soybeans (\$11,150), or a total cash inflow from the sale of crops of \$49,175.

Frank also plans to sell some market hogs during the first quarter of 19X2 for \$13,440, so that amount is entered in the first quarter. Those are all the cash inflows from the sale of crops and market livestock that Frank expects during the first quarter of 19X2.

Frank also plans to sell \$3,000 of breeding stock in 19X2, but he doesn't expect to be paid for the breeding stock during the first quarter.

He does not plan to sell any machinery or equipment during 19X2, and he doesn't have any non-farm income. So cash sales for crops and market hogs are all of the cash inflows for the first quarter.

If we add \$9,660 from the beginning cash balance, \$49,175 from crop sales and \$13,440 from the sale of market hogs, we have total cash available, or \$72,275, for the first quarter.

## **Frank's projected expenses**

Now let's look at the cash operating expenses Frank expects to pay during the first quarter. In our example, we'll combine operating expenses, such as fertilizer, seed, chemicals, fuel and livestock expenses, to keep the example simple, but you need to estimate each expense separately when you do your own cash flow statement. The total amount of cash operating expenses for the first quarter is \$24,974.

Frank also plans to buy and pay for some feed during the first quarter. He estimates he'll spend \$18,000 for the year, spread equally over four quarters, at \$4,500 per quarter.

Although Frank expects to purchase \$1,000 of breeding livestock sometime in 19X2, he doesn't expect to purchase any machinery, equipment or breeding stock during the first quarter, so no cash is expected to flow out of the business for those items. Frank projects he'll spend \$13,000 per year, or \$3,250 per quarter, for family living expenses. So that amount is entered for each quarter.

None of Frank's \$9,000 in principal and \$8,280 in interest on intermediate and long-term loans is due the first quarter, so no payments are scheduled to be made until later.

If we total all cash outflows for the first quarter, we have \$24,974 for cash operating expenses, \$4,500 for purchased feed and \$3,250 for family living expenses. Total cash required for the first quarter equals \$32,724.

Cash position is calculated by subtracting total cash required for the first quarter (\$32,724) from total cash available for the first quarter (\$72,275). The result is a cash surplus of \$39,551.

Frank decides to use the surplus to pay \$25,000 of the accounts payable carried over from 19X1, and to pay the interest up to date, which equals \$8,440. These payments will cause a total of \$33,440 to flow out of the business.

This leaves an ending cash balance of \$6,111 which becomes the beginning cash balance for the second quarter.

This completes the first quarter of the cash flow statement for 19X2. At the end of the videotape, complete Exercise 2, the projected cash flow statement for Frank Farmer, using the work sheet, p.18.

Due to limited time, our example did not address:

- using work sheets to estimate cash inflows or outflows,
- estimating prices to use in a projected cash flow statement,
- estimating a crop or livestock production plan, or
- taking a detailed look at repayment plans for intermediate and long-term loans.

For more information on any of these areas, I suggest that you contact a county agent, farm manager or ag lender. Additional information is listed in the references.

### **CASH FLOW STATEMENT OUTFLOWS**

1. Operating expenses
2. Livestock purchases
3. Feed purchases
4. Capital expenditures
5. Other expenses
  - Family living
  - Loan repayment

**Equals cash required**

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# Exercise 1

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## Video questions

Indicate whether each of the following statements is true (T) or false (F) and calculate the answers to questions 11-15.

- T   F   1. A cash flow statement summarizes all cash transactions of a business during a given period of time.
- T   F   2. A cash flow statement can only be used as a statement of past performance, since it contains only historical data.
- T   F   3. A cash flow statement contains the same information as an income statement, except the information is broken down into the actual months transactions occurred.
- T   F   4. A cash flow statement is used primarily to report business profitability.
- T   F   5. Principal payments on intermediate and long-term loans are included in a cash flow statement.
- T   F   6. The first line of a cash flow statement is usually the ending cash balance for the previous period.
- T   F   7. Depreciation expenses are included in a cash flow statement.
- T   F   8. Projected cash expenses are recorded on a projected cash flow statement in the month you expect to receive the item purchased, regardless of when the bill is paid.
- T   F   9. A cash flow statement is prepared for a specified period of time.
- T   F   10. A cash flow statement can be prepared on an annual, quarterly or monthly basis.

Use the following facts to prepare a projected annual cash flow statement for year 19X2. Some of the information may not be needed.

- 1. Projected annual cash crop sales for 19X2 = \$100,000.
- 2. Projected annual cash livestock sales for 19X2 = \$50,000.
- 3. Cash balance on 12/31/19X1 = \$10,000.
- 4. Anticipated depreciation for 19X2 = \$15,000.

5. Projected family living expenses for 19X2 = \$20,000.
6. Projected cash operating expenses to be paid in 19X2 = \$125,000.
7. Projected annual feed purchases to be paid in 19X2 = \$20,000.
8. The current operating loan balance is \$50,000. Additional operating funds can be borrowed. The farmer wants to always keep a minimum of \$5,000 in his checking account for emergencies.

Once you have prepared a projected cash flow statement, answer the following questions.

11. What is the projected total cash available for the year? \_\_\_\_\_
12. What is the total cash required for the year? \_\_\_\_\_
13. What is the projected ending cash balance? \_\_\_\_\_
14. What is the cash position before savings and borrowing? \_\_\_\_\_
15. What is the projected operating loan balance on 12/31/19X2? \_\_\_\_\_

# Exercise 2

## Preparing a quarterly cash flow statement

Due to the limited time for completing this exercise, entries are grouped together, and where possible, round numbers are used for ease of calculation. However, when completing a projected cash flow statement for your own operation, be as detailed and accurate as possible when estimating cash inflows and outflows.

Fill in the amounts for the last three quarters of 19X2 for Frank Farmer's projected cash flow statement using the work sheet, p. 18. The information necessary to complete the exercise is provided below.

Second quarter 19X2 (April - June)

Third quarter 19X2 (July - September)

Fourth quarter 19X2 (October - December)

1. The beginning cash balance on January 1, 19X2, is \$9,660.
2. Frank projects he will sell about the same amount of corn and soybeans in 19X2 as he did in 19X1 for approximately the same prices. His projected grain sales, by quarter for 19X2, are presented below.

|            | Total    | Jan-Mar | Apr-Jun | Jul-Sep | Oct-Dec |
|------------|----------|---------|---------|---------|---------|
| Grain-corn | \$76,025 | 38,025  | 19,000  | 0       | 19,000  |
| -soybeans  | \$44,600 | 11,150  | 11,150  | 11,150  | 11,150  |

3. Frank projects he will sell about the same number of market hogs in 19X2 as he did in 19X1. He will market approximately the same number of hogs each quarter. Estimated receipts from the sale of market hogs are listed below.

|                       | Total    | Jan-Mar | Apr-Jun | Jul-Sep | Oct-Dec |
|-----------------------|----------|---------|---------|---------|---------|
| Livestock-market hogs | \$53,760 | 13,440  | 13,440  | 13,440  | 13,440  |

4. Frank hopes to sell some cull sows and boars during the second and fourth quarters. Anticipated receipts for each quarter are listed below.

|                    | Total    | Jan-Mar | Apr-Jun | Jul-Sep | Oct-Dec |
|--------------------|----------|---------|---------|---------|---------|
| Breeding livestock | \$ 3,000 | 0       | 1,500   | 0       | 1,500   |

5. Frank used several work sheets and his actual expenditures during 19X1 to estimate operating expenses for 19X2. Total operating expenses (except feed and interest on his intermediate-term and long-term loans) are listed below.

|                    | <b>Total</b> | <b>Jan-Mar</b> | <b>Apr-Jun</b> | <b>Jul-Sep</b> | <b>Oct-Dec</b> |
|--------------------|--------------|----------------|----------------|----------------|----------------|
| Operating expenses | \$107,825    | 24,974         | 34,571         | 19,840         | 28,440         |

6. Frank projects he will spend about \$18,000 for feed during year 19X2, which will be distributed equally throughout the year (\$4,500 per quarter).
7. Frank will buy some breeding livestock during the second and fourth quarters of 19X2. He expects to spend about \$500 each quarter.
8. Frank expects to spend about \$13,000 for family living expenses during 19X2. This is to be spread evenly throughout the year (\$3,250 per quarter).
9. Frank's intermediate-term loan payments consist of \$6,000 plus interest for his machinery loan, which is due on 6/30/19X2. His current balance is \$24,000, and the current interest rate is 12%. Frank made his last payment on 6/30/19X1.
10. Frank has a current outstanding balance for his real estate loan of \$54,000. The interest rate is 10%, and his next payment is due 12/31/19X2. Frank made his last payment on 12/31/19X1. Frank's payment consists of \$3,000 plus interest.
11. Frank wants to keep at least \$5,000 in his checking account for emergencies. He can borrow operating funds from his lender at an interest rate of 12%.

# Ending balance sheet

Name: Frank Farmer

Date: December 31, 19X1

| Assets               |            |              | Liabilities and net worth |            |              |
|----------------------|------------|--------------|---------------------------|------------|--------------|
|                      | Cost       | Market value |                           | Cost       | Market value |
| Current assets       |            |              | Current liabilities       |            |              |
| Cash                 | \$ 9,660   | \$ 9,660     | Accounts payable          | \$ 86,000  | \$ 86,000    |
| Livestock:           |            |              | Portions of I-T and L-T   |            |              |
| Hogs                 | 22,000     | 22,000       | debt due in 12 months:    |            |              |
| Grain inventory:     |            |              | Intermediate (I-T)        | 6,000      | 6,000        |
| Corn                 | 60,000     | 60,000       | Long-term (L-T)           | 3,000      | 3,000        |
| Soybeans             | 15,000     | 15,000       | Accrued interest:         |            |              |
| Supplies             | 3,340      | 3,340        | Accounts payable          | 5,860      | 5,860        |
|                      |            |              | Intermediate (I-T)        | 1,440      | 1,440        |
|                      |            |              | Long-term (L-T)           | 0          | 0            |
|                      |            |              | Accrued taxes:            |            |              |
|                      |            |              | Real estate               | 500        | 500          |
|                      |            |              | Income & Soc. Sec.        | 1,200      | 1,200        |
| Other                | 0          | 0            | Other                     | 0          | 0            |
| Total current assets | \$ 110,000 | \$ 110,000   | Total current liabilities | \$ 104,000 | \$ 104,000   |

| Assets                    |            |              | Liabilities and net worth                             |            |              |
|---------------------------|------------|--------------|-------------------------------------------------------|------------|--------------|
|                           | Cost       | Market value |                                                       | Cost       | Market value |
| Intermediate assets       |            |              | Intermediate liabilities                              |            |              |
| Machinery:                |            |              | Machinery loan<br>(Amount due beyond 12 months)       |            |              |
| Cost     \$136,000        | \$ 94,000  | \$ 94,000    |                                                       | \$ 18,000  | \$ 18,000    |
| Acc. Dep. 45,000          | 91,000     |              |                                                       |            |              |
| Breeding livestock        | 9,000      | 9,000        |                                                       |            |              |
| Other                     | 0          | 0            | Other                                                 | 0          | 0            |
| Total intermediate assets | \$ 100,000 | \$ 103,000   | Total intermediate liabilities                        | \$ 18,000  | \$ 18,000    |
| Long-term assets          |            |              | Long-term liabilities                                 |            |              |
| Land and buildings:       |            |              | Real estate mortgage<br>(Amount due beyond 12 months) |            |              |
| Cost     \$124,000        | \$ 110,000 | \$ 117,000   |                                                       | \$ 51,000  | \$ 51,000    |
| Acc. Dep. 14,000          | 110,000    |              |                                                       |            |              |
| Other                     | 0          | 0            | Other                                                 | 0          | 0            |
| Total long-term assets    | \$ 110,000 | \$ 117,000   | Total long-term liabilities                           | \$ 51,000  | \$ 51,000    |
|                           |            |              | Total liabilities                                     | \$ 173,000 | \$ 173,000   |
|                           |            |              | Net worth                                             | \$ 147,000 | \$ 157,000   |
| Total assets              | \$ 320,000 | \$ 330,000   | Total liabilities and net worth                       | \$ 320,000 | \$ 330,000   |

# Income statement

Name: Frank Farmer

12-month period ending: 12-31-19X1

| Revenue                    |             |           | Cash<br>accounting | Accrual<br>accounting |
|----------------------------|-------------|-----------|--------------------|-----------------------|
| Cash farm revenue          |             |           |                    |                       |
| Corn .....                 | \$          | 76,050    |                    |                       |
| Soybeans .....             |             | 44,600    |                    |                       |
| Market hogs .....          |             | 53,760    |                    |                       |
| Breeding livestock .....   |             | 3,060     |                    |                       |
| Other .....                |             | 0         |                    |                       |
| Total cash farm revenue    |             |           | \$ 177,470         | \$ 177,470            |
| Inventory adjustments      |             |           |                    |                       |
|                            | Inventories |           | Difference         |                       |
|                            | Beg.        | End.      | (End.-Beg.)        |                       |
| Corn                       | \$ 60,000   | \$ 60,000 | \$ 0               |                       |
| Soybeans                   | 20,000      | 15,000    | - 5,000            |                       |
| Market hogs                | 20,000      | 22,000    | + 2,000            |                       |
| Breeding livestock         | 10,000      | 9,000     | - 1,000            |                       |
| Other                      | 0           | 0         | 0                  |                       |
| Total inventory adjustment |             |           | \$ NA              | \$ - 4,000            |
| Total farm revenue         |             |           | \$ 177,470         | \$ 173,470            |

| Expenses                                 |                  | Cash accounting    | Accrual accounting |
|------------------------------------------|------------------|--------------------|--------------------|
| - Feed purchased                         |                  | \$ <u>-18,000</u>  | \$ <u>-18,000</u>  |
| Value of farm production                 |                  | \$ <u>159,470</u>  | \$ <u>155,470</u>  |
| Cash farm operating expenses             |                  |                    |                    |
| Interest .....                           | \$ <u>18,870</u> |                    |                    |
| Other cash farm operating expenses ..... | <u>105,940</u>   |                    |                    |
| Total cash farm operating expenses       |                  | \$ <u>-124,810</u> | \$ <u>-124,810</u> |
| Net cash farm income                     |                  | \$ <u>34,660</u>   | \$ <u>NA</u>       |
| - Depreciation                           |                  | \$ <u>-17,000</u>  | \$ <u>-17,000</u>  |
| Other non-cash expense adjustments       |                  |                    |                    |
| Assets                                   |                  |                    |                    |
|                                          | <u>Accounts</u>  | <u>Difference</u>  |                    |
|                                          | Beg. End.        | (End.-Beg.)        |                    |
| Unused supplies                          | \$ <u>5,000</u>  | \$ <u>3,340</u>    | \$ <u>-1,660</u>   |
| Other                                    | <u>0</u>         | <u>0</u>           | <u>0</u>           |
| Liabilities                              |                  |                    |                    |
|                                          |                  | <u>Difference</u>  |                    |
|                                          |                  | (Beg.-End.)        |                    |
| Accounts payable                         | \$ <u>82,000</u> | \$ <u>86,000</u>   | \$ <u>-4,000</u>   |
| Accrued interest                         | <u>7,300</u>     | <u>7,300</u>       | <u>0</u>           |
| Accrued taxes                            | <u>1,700</u>     | <u>1,700</u>       | <u>0</u>           |
| Other                                    | <u>0</u>         | <u>0</u>           | <u>0</u>           |
| Total other non-cash expense adjustments |                  | \$ <u>NA</u>       | \$ <u>-5,660</u>   |
| Net farm income                          |                  | \$ <u>17,660</u>   | \$ <u>8,000</u>    |

# Work sheet

## Preparing a quarterly cash flow statement

Name: Frank Farmer

Period: 19X2

|                        | Total        | (Video<br>example)<br>Quarter 1<br>Jan-Mar | Quarter 2<br>Apr-Jun | Quarter 3<br>Jul-Sep | Quarter 4<br>Oct-Dec |
|------------------------|--------------|--------------------------------------------|----------------------|----------------------|----------------------|
| Beginning cash balance | \$ 9,660     | \$ 9,660                                   | \$ 6,111             | \$ _____             | \$5,000              |
| Operating receipts:    |              |                                            |                      |                      |                      |
| Crops:                 |              |                                            |                      |                      |                      |
| Corn                   | 76,025       | 38,025                                     | _____                | _____                | _____                |
| Soybeans               | 44,600       | 11,150                                     | _____                | _____                | _____                |
| Market livestock       | 53,760       | 13,440                                     | _____                | _____                | _____                |
| Capital receipts:      |              |                                            |                      |                      |                      |
| Breeding livestock     | <u>3,000</u> | <u>0</u>                                   | <u>_____</u>         | <u>_____</u>         | <u>_____</u>         |
| Total cash available   | \$187,045    | \$72,275                                   | \$51,201             | \$ _____             | _____ \$             |

|                                                      |                   | (Video<br>example)<br>Quarter 1<br>Jan-Mar | Quarter 2<br>Apr-Jun | Quarter 3<br>Jul-Sep | Quarter 4<br>Oct-Dec |
|------------------------------------------------------|-------------------|--------------------------------------------|----------------------|----------------------|----------------------|
|                                                      | Total             |                                            |                      |                      |                      |
| Operating expenses                                   | \$107,825         | \$24,974                                   | _____                | _____                | _____                |
| Feed purchases                                       | 18,000            | 4,500                                      | _____                | _____                | _____                |
| Capital expenditures:                                |                   |                                            |                      |                      |                      |
| Breeding livestock                                   | 1,000             | 0                                          | _____                | _____                | _____                |
| Other expenditures:                                  |                   |                                            |                      |                      |                      |
| Family living                                        | 13,000            | 3,250                                      | _____                | _____                | _____                |
| Intermediate-term<br>and long-term<br>loan payments  |                   |                                            |                      |                      |                      |
| Principal                                            | 9,000             | 0                                          | _____                | _____                | _____                |
| Interest                                             | 8,280             | 0                                          | _____                | _____                | _____                |
|                                                      | <u>          </u> | <u>          </u>                          | <u>          </u>    | <u>          </u>    | <u>          </u>    |
| Total cash required                                  | \$157,105         | \$32,724                                   | \$51,701             | \$_____              | _____ \$             |
| Cash position before<br>savings and borrowing        | \$29,940          | \$39,551                                   | \$ (500)             | \$ 2,000             | _____ \$             |
| Money to be borrowed:                                |                   |                                            |                      |                      |                      |
| Operating                                            |                   | 0                                          | _____                | _____                | _____                |
| Intermediate-term<br>and long-term                   |                   | 0                                          | _____                | _____                | _____                |
| Payments on operating loans<br>and accounts payable: |                   |                                            |                      |                      |                      |
| Principal                                            |                   | \$25,000                                   | _____                | _____                | _____                |
| Interest                                             |                   | 8,440                                      | _____                | _____                | _____                |
| Outflows to savings                                  |                   | 0                                          | _____                | _____                | _____                |
|                                                      |                   | <u>          </u>                          | <u>          </u>    | <u>          </u>    | <u>          </u>    |
| Ending cash balance                                  |                   | \$ 6,111                                   | \$ 5,000             | \$_____              | \$ 5,000             |

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# Answer key 1

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## Video questions

Indicate whether each of the following statements is true (T) or false (F) and calculate the answers to questions 11-15.

- T F** 1. A cash flow statement summarizes all cash transactions of a business during a given period of time.
- T E** 2. A cash flow statement can only be used as a statement of past performance, since it contains only historical data.

**Comment: False.** A cash flow statement can be used as a statement of past performance or as a budget for future plans.

- T E** 3. A cash flow statement contains the same information as an income statement, except the information is broken down into the actual months transactions occurred.

**Comment: False.** A complete cash flow statement includes non-farm or non-ranch business items, family living expenses, principal payments on loans and the purchase and/or sale of capital items, which are not included on an income statement. On the other hand, an income statement prepared using accrual accounting includes changes in inventories. A cash flow statement includes sales and purchases, but there is no adjustment for inventory changes. Also, an income statement includes depreciation as an expense. On a cash flow statement, depreciation (a non-cash expense) does not appear.

- T E** 4. A cash flow statement is used primarily to report business profitability.

**Comment: False.** A cash flow statement by itself tells nothing about the profitability of a business, since it includes only cash transactions and omits depreciation.

- T F** 5. Principal payments on intermediate and long-term loans are included in a cash flow statement.

- T F** 6. The first line of a cash flow statement is usually the ending cash balance for the previous period.

**T F** 7. Depreciation expenses are included in a cash flow statement.

**Comment: False.** Depreciation is a non-cash expense, so it is not included in a cash flow statement.

**T F** 8. Projected cash expenses are recorded on a projected cash flow statement in the month you expect to receive the item purchased, regardless of when the bill is paid.

**Comment: False.** Projected cash expenses are recorded in the time period when the bill is expected to be paid.

**T F** 9. A cash flow statement is prepared for a specified period of time.

**T F** 10. A cash flow statement can be prepared on an annual, quarterly or monthly basis.

Use the following facts to prepare a projected annual cash flow statement for year 19X2. Some of the information may not be needed.

1. Projected annual cash crop sales for 19X2 = \$100,000.
2. Projected annual cash livestock sales for 19X2 = \$50,000.
3. Cash balance on 12/31/19X1 = \$10,000.
4. Anticipated depreciation for 19X2 = \$15,000.
5. Projected family living expenses for 19X2 = \$20,000.
6. Projected cash operating expenses to be paid in 19X2 = \$125,000.
7. Projected annual feed purchases to be paid in 19X2 = \$20,000.
8. The current operating loan balance is \$50,000. Additional operating funds can be borrowed. The farmer wants to always keep a minimum of \$5,000 in his checking account for emergencies.

When you have prepared a projected cash flow statement, answer the following questions.

|                                               |               |                  |
|-----------------------------------------------|---------------|------------------|
| Beginning cash balance                        | \$ 10,000     |                  |
| Cash operating receipts:                      |               |                  |
| Crops                                         | 100,000       |                  |
| Livestock                                     | <u>50,000</u> |                  |
| Total cash available                          |               | \$160,000        |
| Cash operating expenses                       | 125,000       |                  |
| Feed purchases                                | 20,000        |                  |
| Family living expenses                        | <u>20,000</u> |                  |
| Total cash required                           |               | <u>\$165,000</u> |
| Cash position before savings<br>and borrowing |               | (5,000)          |
| Operating loan                                |               | <u>10,000</u>    |
| Ending cash balance                           |               | \$ 5,000         |

11. What is the projected total cash available for the year? \$160,000
12. What is the total cash required for the year? \$165,000
13. What is the projected ending cash balance? \$5,000
14. What is the cash position before savings and borrowing? (\$5,000)
15. What is the projected operating loan balance on 12/31/19X2? \$60,000 \*

\* Remember, the balance of the operating loan on 12/31/19X1 is \$50,000. The \$10,000 operating loan borrowed during 19X2 is added to \$50,000 to give a projected operating loan balance on 12/31/19X2 of \$60,000.

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# Answer key 2

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## Preparing a quarterly cash flow statement

Name: Frank Farmer

Period: 19X2

|                        | Total        | (Video<br>example)<br>Quarter 1<br>Jan-Mar | Quarter 2<br>Apr-Jun | Quarter 3<br>Jul-Sep | Quarter 4<br>Oct-Dec |
|------------------------|--------------|--------------------------------------------|----------------------|----------------------|----------------------|
| Beginning cash balance | \$ 9,660 *   | \$ 9,660                                   | \$ 6,111             | \$ 5,000             | \$5,000              |
| Operating receipts:    |              |                                            |                      |                      |                      |
| Crops:                 |              |                                            |                      |                      |                      |
| Corn                   | 76,025       | 38,025                                     | 19,000               | 0                    | 19,000               |
| Soybeans               | 44,600       | 11,150                                     | 11,150               | 11,150               | 11,150               |
| Market livestock       | 53,760       | 13,440                                     | 13,440               | 13,440               | 13,440               |
| Capital receipts:      |              |                                            |                      |                      |                      |
| Breeding livestock     | <u>3,000</u> | <u>0</u>                                   | <u>1,500</u>         | <u>0</u>             | <u>1,500</u>         |
| Total cash available   | \$187,045 *  | \$72,275                                   | \$51,201             | \$29,590             | \$50,090             |

|                                                     |                  | (Video<br>example)<br>Quarter 1<br>Jan-Mar | Quarter 2<br>Apr-Jun | Quarter 3<br>Jul-Sep | Quarter 4<br>Oct-Dec |
|-----------------------------------------------------|------------------|--------------------------------------------|----------------------|----------------------|----------------------|
|                                                     | <b>Total</b>     |                                            |                      |                      |                      |
| Operating expenses                                  | 107,825          | 24,974                                     | 34,571               | 19,840               | 28,440               |
| Feed purchases                                      | 18,000           | 4,500                                      | 4,500                | 4,500                | 4,500                |
| Capital expenditures:                               |                  |                                            |                      |                      |                      |
| Breeding livestock                                  | 1,000            | 0                                          | 500                  | 0                    | 500                  |
| Other expenditures:                                 |                  |                                            |                      |                      |                      |
| Family living                                       | 13,000           | 3,250                                      | 3,250                | 3,250                | 3,250                |
| Intermediate-term<br>and long-term<br>loan payments |                  |                                            |                      |                      |                      |
| Principal                                           | 9,000            | 0                                          | 6,000                | 0                    | 3,000                |
| Interest                                            | 8,280            | 0                                          | 2,880                | 0                    | 5,400                |
| Total cash required                                 | <u>\$157,105</u> | <u>\$32,724</u>                            | <u>\$51,701</u>      | <u>\$27,590</u>      | <u>\$45,090</u>      |
| Cash position before savings<br>and borrowing       | \$29,940 *       | \$39,551                                   | \$ (500)             | \$ 2,000             | \$ 5,000             |
| Money to be borrowed:                               |                  |                                            |                      |                      |                      |
| Operating                                           |                  | 0                                          | 5,500                | 3,000                | 0                    |
| Intermediate-term<br>and long-term                  |                  | 0                                          | 0                    | 0                    | 0                    |
| Payments on operating loans and accounts payable:   |                  |                                            |                      |                      |                      |
| Principal                                           |                  | 25,000                                     | 0                    | 0                    | 0                    |
| Interest                                            |                  | 8,440                                      | 0                    | 0                    | 0                    |
| Outflows to savings                                 |                  | 0                                          | 0                    | 0                    | 0                    |
| Ending cash balance                                 |                  | <u>\$ 6,111</u>                            | <u>\$ 5,000</u>      | <u>\$ 5,000</u>      | <u>\$ 5,000</u>      |

\* Amounts in the "Total" column for "Beginning cash balance," "Total cash available" and "Cash position before savings and borrowing" will not equal the sum of the amounts in the four quarters because the ending cash balance for a previous period is carried forward to be the beginning cash balance for the next period. All other amounts in the "Total" column are the sum of the four quarters.

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