



Preparing an income statement

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Preparing an income statement



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Purpose

The purpose of this module is to help you:

1. become comfortable with an income statement, or profit and loss statement, and realize its importance in analyzing your farm business,
2. recognize the structure and five major components of an income statement,
3. become acquainted with the cash and accrual methods of determining net farm income,
4. learn how to prepare an income statement,
5. appreciate at least four uses of an income statement,
6. be aware that there are many pre-printed income statement forms available and that you should select the one(s) best suited to your business, and
7. learn about the important relationship between a balance sheet and an income statement and the role of each in business performance analysis.

Videotape script

By Freddie L. Barnard

In working with Midwestern farmers, I find that many of them are not fully aware of the benefits of developing financial statements. These statements can help you analyze the business performance of your farm. For example, an income statement answers questions such as: Did our operation end the year with a profit or a loss, and how much was the profit or loss? These important questions are especially crucial during times when resources are limited, and everyone seems to lay claim to fewer dollars.

You'll find income statements useful in completing Federal Income Tax Schedule F. Information from an income statement can help you calculate a variety of financial

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.

ratios for analyzing business strengths and weaknesses and will help you work with lenders when you apply for a loan or refinance an existing one.

Since we won't have time to discuss all the specific aspects of an income statement during this session, we hope to point out areas where you may need to seek additional advice when you prepare an income statement. Our discussion will focus on the definition, uses, structure and preparation of an income statement. We'll also discuss cash versus accrual accounting.

An income statement, or profit and loss statement as it is sometimes called, is a summary of revenue (gross receipts) minus expenses associated with generating that revenue. The result is net farm income. Let's look at that definition in more detail.

Financial moving picture

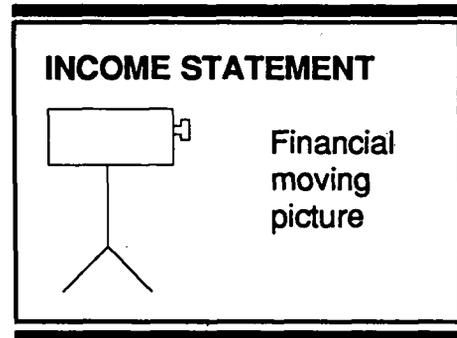
An income statement provides a moving picture of business revenues, expenses and net farm income for a specified period of time. That period of time is usually one year and is most likely the same period used for reporting income taxes.

Farm revenue consists of the proceeds received, or value created, from current business operations and any gain or loss from farm investment activities. Examples of farm revenue from current business operations include cash proceeds from the sale of crops, livestock and livestock products. Also included are cash payments from government farm programs and payments for custom work done for others. Non-cash sources of revenue from current business operations include an increase in accounts receivable and increases in inventories of crops, feed and livestock.

All business expenses during the period are also included in an income statement. Expenses are grouped into two categories -- cash operating expenses and non-cash expenses. Examples of cash operating expenses include seed, fertilizer, chemicals and interest. The major non-cash expense is the depreciation allowed under federal income tax laws on qualifying items.

Other non-cash expenses are considered when using accrual accounting. They include changes in accounts payable, changes in accrued expenses such as interest, changes in unused supplies, cash invested in growing crops, and prepaid expenses. We'll talk more about these non-cash adjustments when we discuss accrual accounting.

Finally, we'll discuss two net income figures -- net cash income and net farm income -- during this session. We'll talk about net farm income first, using less accurate cash accounting, and later, using accrual accounting. Basically,



net cash income equals cash revenue minus cash expenses. Subtracting depreciation from net cash income yields net farm income, using cash accounting.

Net farm income

However, net farm income using cash accounting takes into account only cash revenue and expenses, and depreciation. And as we know, these items can be greatly influenced by changes in inventories and non-cash expenses. Accrual accounting takes those changes into account and allows us to calculate net farm income more accurately. Let's look at the ways you can use the information reported on an income statement.

The primary use of an income statement is to summarize revenue and expenses associated with business activities during the year. This allows you to see if there was a profit or a loss for the business year. Calculating net farm income also helps explain changes in net worth.

An income statement also provides information for calculating financial ratios which can be used to assess profitability and efficiency.

Finally, lenders often request an income statement when you apply for a loan or when you refinance an existing loan.

Now let's look at how an income statement is structured. We've seen that the basic structure of an income statement using cash accounting is: Cash revenue minus cash expenses equals net cash income minus depreciation equals net farm income.

The flexibility and simplicity of the cash method of accounting for tax management make it a popular choice among many agricultural producers.

However, to accurately represent true net farm income, inventory adjustments and adjustments for changes in non-cash expenses must also be included when calculating net farm income. This method of accounting is called the accrual method. The accrual method reflects changes in inventory values and changes in non-cash expenses that occurred between the beginning and end of the accounting period. In order to prepare an income statement using accrual accounting, you need a beginning and ending balance sheet that reflects these changes.

Let's look at how some of those balance sheet changes occur. In terms of farm revenue, changes in inventories are caused by changes in the *physical quantities* of assets or changes in the *prices* of those assets, or both. Examples of such assets are grain, livestock held for sale and breeding livestock.

Examples of non-cash farm expenses that could change from beginning to end of the accounting period and would change net farm income are: accounts payable, accrued

CHANGES IN INVENTORIES ARE CAUSED BY CHANGES IN:

- Quantities
- Prices
- Both

expenses such as interest and taxes, unused supplies from a previous period, investment in growing crops, and prepaid expenses.

Most income statements include non-cash adjustments in the statement's revenue and expense sections.

For analysis purposes, an income statement is often organized so that purchased feed and livestock are subtracted from total revenue to calculate the value of farm or ranch production. It is often felt that these purchased items overstate revenue actually produced by a business.

An income statement using accrual accounting to calculate net farm income would look something like this (right). We see that the value of farm production, adjusted by cash expenses, depreciation and non-cash expenses, yields the true net farm income. This is the return to operator and family labor, management and equity capital. This is the amount available for family living expenses, income taxes, investment and savings. It is also the amount used to make principal payments on intermediate and long-term debts.

Example: Frank Farmer

To illustrate what we've been discussing, let's look at a simplified income statement (p. 16) that uses data from an actual business. This example business is run by a person we'll call Frank Farmer.

Frank is a sole proprietor who owns 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's income statement is for year 19X1. This is the calendar year, which is also Frank's business and tax year. During the year, Frank's cash revenue included:

<u>Sales</u>	
Corn	\$ 76,050
Soybeans	44,600
Market hogs	53,760
Breeding stock	<u>3,060</u>
Total cash revenue	\$177,470

INCOME STATEMENT

Total farm revenue
± Inventory adjustments
- Purchased feed
- Purchased livestock
<hr/>
= Value of farm production
- Cash expenses
- Depreciation
± Non-cash expenses
<hr/>
= Net farm income

NET CASH INCOME	
Total cash revenue	\$177,470
- Total cash expenses	<u>-142,810</u>
= Net cash income	\$ 34,660

Cash expenses for Frank's business during 19X1 included:

Feed	\$ 18,000
Cash operating expenses (Hired labor, repairs, seed, chemicals, fertilizer, interest, etc.)	124,810 <hr/>
Total cash expenses	\$142,810

From this information we can calculate Frank's net cash income. This is done by subtracting total cash expenses of \$142,810 from total cash revenue of \$177,470. Our net cash income is \$34,660.

The next step in calculating net farm income is to subtract Frank's annual depreciation of \$17,000 from his net cash income. This gives a net farm income of \$17,660, using the cash accounting method.

Using accrual accounting

Let's say Frank wants to calculate net farm income using the more accurate accrual accounting method. What adjustments would he have to make? In order to identify changes in his asset and liability accounts, we'll need to look at Frank's beginning and ending balance sheets.

First, let's look at the adjustments needed for Frank's revenue. We already have cash revenue of \$177,470 from his current business operations, but we need to know about changes in inventories that will affect net farm income. Looking closely, we find there are three asset accounts that changed in value from the beginning to the end of the year.

Frank's grain inventories decreased by \$5,000 (from \$80,000 to \$75,000) due to Frank having 1,000 fewer bushels of soybeans, valued at \$5 per bushel on both balance sheets, in inventory. Livestock held for sale increased in value by \$2,000 (from \$20,000 to \$22,000) due to an increase in the price of market hogs. His breeding stock decreased in value by \$1,000 (from \$10,000 to \$9,000) due to a decrease in the number of breeding animals.

To adjust Frank's cash revenue, we need to subtract \$5,000, add \$2,000 and subtract \$1,000 from total cash revenue. This gives a total farm revenue of \$173,470.

Frank did not have any gain or loss from business investment activities, so his total farm revenue, using accrual accounting, remains \$173,470.

Once inventories are adjusted, we must calculate the value of farm or ranch production by deducting the value of purchased feed and livestock from total farm revenue. The result for Frank Farmer is a value of farm production of \$155,470. This can be interpreted as the value added from farming activities in year 19X1.

How about expenses? We already have Frank's cash operating expenses of \$124,810, excluding feed purchased, and \$17,000 of depreciation. But there were changes in some of Frank's asset and liability accounts that need to be incorporated as non-cash expense adjustments.

We notice that Frank's supplies at the beginning of the year were valued at \$5,000. That value dropped to \$3,340 by year's end. The difference of \$1,660 should be added to Frank's expenses.

While these expenses were paid for in 19X0, they were used to support production in 19X1 and should appear as an expense on the 19X1 income statement. Also, Frank's accounts payable increased during the year by \$4,000 (from \$82,000 at the beginning of the year to \$86,000 at the end of the year). This should also be added to Frank's cash operating expenses and depreciation. So we end up with:

Cash operating expenses	\$124,810
+ Depreciation	17,000
+ Decrease in supplies	1,660
+ Increase in accounts payable	<u>4,000</u>
Total operating expenses	\$147,470

If we look at our income statement with all figures substituted, and if we now subtract total operating expenses (\$147,470) from the value of farm production (\$155,470), we have a net farm income, using accrual accounting, of \$8,000. This is the before-tax compensation Frank and his family received in 19X1 for their management, labor and equity capital. Note that net farm income computed with the more accurate accrual method is \$9,660 less than with the cash method.

Owner equity

Now let's try to reconcile our balance sheets with our income statement. There must be some link between those statements, because we said earlier that one of the primary uses of an income statement was to explain changes in net worth. Perhaps the simplest way to explain this link is with the statement of owner equity (p. 18).

Let's illustrate the link among the statements by again using Frank Farmer. Frank's net worth at the beginning of the period (December 31, 19X0), using the cost method of valuing assets, was \$152,000. This came from Frank's December 31, 19X0, balance sheet. Frank's net farm income for year 19X1 was \$8,000. This figure came from Frank's income statement.

Frank received no gifts during the period, and since he operates a sole proprietorship, he did not receive any additions to paid-in capital as could happen with a partnership or a corporation.

NON-CASH EXPENSE ADJUSTMENTS

Cash operating expenses	\$124,810
Depreciation	17,000
Unused supplies	1,660
Accounts payable	<u>4,000</u>
Total operating expenses	\$147,470

If we add Frank's cost net worth at the beginning of the period to his net farm income, we should have Frank's cost net worth at the end of the period. For Frank, that is \$160,000. However, when we look at Frank's cost net worth on his December 31, 19X1, balance sheet, we see it is only \$147,000, a difference of \$13,000. This difference is the amount Frank withdrew during the accounting period to pay family living expenses, and income and Social Security taxes.

We also notice that the difference between Frank's cost net worth at the beginning and end of the period is a negative \$5,000. So Frank not only spent his \$8,000 net farm income for family living and taxes, but also \$5,000 of his net worth.

Frank Farmer's 19X0 and 19X1 balance sheets show that his market value net worth at the beginning and end of the period decreased by \$15,000 (from \$172,000 to \$157,000). Part of that decrease is explained by Frank spending \$13,000 for family living and taxes, when his net farm income was only \$8,000, a difference of \$5,000. The remaining \$10,000 decrease in market-value net worth is due to a drop in the market value of Frank's assets. Let's look at how Frank's assets lost value.

The market value of Frank's machinery dropped during the year by \$8,000 (\$102,000 to \$94,000). But \$6,000 of that amount was due to his annual depreciation of \$15,000 exceeding his purchase of new machinery (\$9,000). So \$2,000 was due to a decline in the market price of his machinery.

The market value of Frank's real estate declined from \$127,000 to \$117,000, or \$10,000, but again \$2,000 was due to depreciation on his buildings. So \$8,000 was due to a decline in the market price of his land. The \$2,000 decline for machinery plus the \$8,000 decline for land equals \$10,000.

An income statement and balance sheet can be useful in interpreting changes in net worth. In Frank's case, falling prices in capital assets accounted for \$10,000 of the \$15,000 decline in market-value net worth. This reflects less seriously on Frank's ability to succeed in the long run than if the net worth reversal had been due largely to management-related operating losses.

This completes our session on the income statement. Due to limited time, we did not address such important areas as: income and losses from hedging accounts, gains and losses from the sale of intermediate and long-term assets, extraordinary gains and losses, and income taxes.

If any of these areas apply to your business, I suggest you seek the advice of an accountant, tax practitioner, county agent or agricultural lender. Additional information can also be found in the references.

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Exercise 1

Video questions

Indicate whether each of the following statements is true (T) or false (F).

- T F 1. An income statement is a summary of the revenue generated during a specified period, usually one year, minus the expenses associated with generating that revenue, with net farm income the result.
- T F 2. Farm revenue consists of proceeds from current business operations and the gain or loss from farm investment activities.
- T F 3. Net cash farm income includes inventory adjustments.
- T F 4. Net farm income using cash accounting can be calculated by subtracting depreciation from net cash farm income.
- T F 5. Depreciation is a cash expense.
- T F 6. Cash payments from government farm programs are considered farm revenue.
- T F 7. There are two categories of farm expenses on an income statement using accrual accounting. Those categories are cash operating expenses and non-cash expenses.
- T F 8. Cash outlays to purchase farm machinery are included on an income statement as a cash expense.
- T F 9. Net cash farm income is calculated by subtracting cash expenses during the period (including cash outlays for farm real estate) from cash revenue.
- T F 10. One use of an income statement is to help explain changes in a business's net worth.

Situation:

Farmer Jones has cash farm revenue for the year totaling \$100,000. His cash farm operating expenses for the year equal \$65,000. His depreciation for the year equals \$20,000. The value of his grain inventory decreased from the beginning to the end of the year by \$15,000. He also purchased a tractor for \$30,000 during the year and paid for it in cash. Using only the above information, match the amount to the correct category. A letter can be used more than once, and some letters may not be used.

- | | | |
|-------|--|------------|
| _____ | 11. Net cash farm income | A. 0 |
| _____ | 12. Net farm income (accrual accounting) | B. 15,000 |
| _____ | 13. Net farm income (cash accounting) | C. 35,000 |
| _____ | 14. Total expenses (cash accounting) | D. 85,000 |
| _____ | 15. Total expenses (accrual accounting) | E. 115,000 |
- T F 16. To prepare an income statement using accrual accounting, you need a beginning and ending balance sheet.
- T F 17. An increase in the value of farm or ranch real estate that was not sold during the year should be included on the income statement as farm revenue when using accrual accounting.
- T F 18. Using accrual accounting, when the value of livestock held for sale at the beginning of the period is less than the value at the end of the year, the amount of the increase should be added to cash revenue to calculate total revenue.
- T F 19. Using accrual accounting, when the value of accrued interest on the beginning balance sheet is less than the amount on the ending balance sheet, the amount of the increase should be added to cash operating expenses and depreciation to calculate the amount of total expenses.
- T F 20. Using accrual accounting, when the value of supplies on hand at the beginning of the year is greater than the value at the end of the year, the amount of the decrease should be added to cash operating expenses and depreciation to calculate the amount of total expenses.

Exercise 2

Calculating net cash and net farm income

Assume that Frank Farmer's cash revenue from the sale of corn is \$101,050 and that his beginning inventory of corn was \$60,000, but his ending inventory of corn was \$35,000. Assume all other revenue and expense items are the same for Frank Farmer as those in the video example.

1. Calculate Frank Farmer's net cash farm income.
2. Using cash accounting, calculate Frank Farmer's net farm income.
3. Using accrual accounting, calculate Frank Farmer's net farm income.
4. If Frank Farmer brought only his income tax return to his lender at the time of his loan application, would he be overstating or understating his true net farm income?

Beginning balance sheet

Name: Frank Farmer

Date: December 31, 19X0

Assets			Liabilities and net worth		
	Cost	Market value		Cost	Market value
Current assets			Current liabilities		
Cash	\$ 6,000	\$ 6,000	Accounts payable	\$ 82,000	\$ 82,000
Livestock: Hogs	20,000	20,000	Portions of I-T and L-T debt due in 12 months: Intermediate (I-T)	6,000	6,000
Grain inventory: Corn	60,000	60,000	Long-term (L-T)	3,000	3,000
Soybeans	20,000	20,000	Accrued interest: Accounts payable	5,500	5,500
Supplies	5,000	5,000	Intermediate (I-T)	1,800	1,800
			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	\$ 111,000	\$ 111,000	Total current liabilities	\$ 100,000	\$ 100,000

Assets			Liabilities and net worth		
	Cost	Market value		Cost	Market value
Intermediate assets			Intermediate liabilities		
Machinery:			Machinery loan (Amount due beyond 12 months)		
Cost \$127,000	\$ 127,000	\$ 102,000		\$ 24,000	\$ 24,000
Acc. Dep. 30,000	97,000				
Breeding livestock	10,000	10,000			
Other	0	0	Other	0	0
Total intermediate assets	\$ 107,000	\$ 112,000	Total intermediate liabilities	\$ 24,000	\$ 24,000
Long-term assets			Long-term liabilities		
Land and buildings:			Real estate mortgage (Amount due beyond 12 months)		
Cost \$124,000	\$ 124,000	\$ 127,000		\$ 54,000	\$ 54,000
Acc. Dep. 12,000	112,000				
Other	0	0	Other	0	0
Total long-term assets	\$ 112,000	\$ 127,000	Total long-term liabilities	\$ 54,000	\$ 54,000
			Total liabilities	\$ 178,000	\$ 178,000
			Net worth	\$ 152,000	\$ 172,000
Total assets	\$ 330,000	\$ 350,000	Total liabilities and net worth	\$ 330,000	\$ 350,000

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 (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 (Amount due beyond 12 months)		
Cost \$124,000	\$ 117,000	\$ 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 accounting	Accrual accounting
Cash farm revenue		
Com	\$ 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		
	<u>Inventories</u>	<u>Difference</u>
	Beg. End.	(End.-Beg.)
Com	\$ 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		\$ - 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>

Statement of owner equity

Name: Frank Farmer

12-month period
ending 12-31-19X1

1. Beginning cost net worth	<u>\$ 152,000</u>
2. Net farm income (accrual)	<u>8,000</u>
3. Gifts and inheritances	<u>0</u>
4. Additions to paid-in capital	<u>0</u>
5. Total available (Sum of lines 1, 2, 3 and 4)	<u>\$ 160,000</u>
6. Gifts made	<u>0</u>
7. Ending cost net worth	<u>147,000</u>
8. Withdrawals (Line 5 minus lines 6 and 7)	<u>\$ 13,000</u>

Work sheet

Name: Frank Farmer

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

Revenue		Cash accounting	Accrual accounting
Cash farm revenue			
Corn	\$ _____		
Soybeans	44,600		
Market hogs	53,760		
Breeding livestock	3,060		
Other	0		
Total cash farm revenue		\$ _____	\$ _____
Inventory adjustments			
	Inventories	Difference	
	Beg. End.	(End.-Beg.)	
Corn	\$ 60,000	\$ _____	\$ _____
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		\$ _____	\$ _____
Total farm revenue		\$ _____	\$ _____

Expenses		Cash accounting	Accrual accounting
- Feed purchased		\$ <u>-18,000</u>	\$ <u>-18,000</u>
Value of farm production		\$ _____	\$ _____
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		\$ _____	\$ _____
- 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		\$ _____	\$ _____
Net farm income		\$ _____	\$ _____

Answer key 1

Video questions

Indicate whether each of the following statements is true (T) or false (F).

T F 1. An income statement is a summary of the revenue generated during a specified period, usually one year, minus the expenses associated with generating that revenue, with net farm income the result.

T F 2. Farm revenue consists of proceeds from current business operations and the gain or loss from farm investment activities.

T F 3. Net cash farm income includes inventory adjustments.

Comment: False. Net cash farm income equals cash revenue minus cash expenses.

T F 4. Net farm income using cash accounting can be calculated by subtracting depreciation from net cash farm income.

T F 5. Depreciation is a cash expense.

Comment: False. Depreciation is a non-cash expense.

T F 6. Cash payments from government farm programs are considered farm revenue.

T F 7. There are two categories of farm expenses on an income statement using accrual accounting. Those categories are cash operating expenses and non-cash expenses.

T F 8. Cash outlays to purchase farm machinery are included on an income statement as a cash expense.

Comment: False. Cash outlays to purchase farm machinery are not included as expenses on an income statement. Instead, they are included as depreciation, which is a non-cash expense.

T F 9. Net cash farm income is calculated by subtracting cash expenses during the period (including cash outlays for farm real estate) from cash revenue.

Comment: False. Cash outlays to purchase farm real estate are not included as a cash expense on an income statement.

T F 10. One use of an income statement is to help explain changes in a business's net worth.

Situation:

Farmer Jones has cash farm revenue for the year totaling \$100,000. His cash farm operating expenses for the year equal \$65,000. His depreciation for the year equals \$20,000. The value of his grain inventory decreased from the beginning to the end of the year by \$15,000. He also purchased a tractor for \$30,000 during the year and paid for it in cash. Using only the above information, match the amount to the correct category. A letter can be used more than once, and some letters may not be used.

- | | | |
|----------|--|------------|
| <u>C</u> | 11. Net cash farm income | A. 0 |
| <u>A</u> | 12. Net farm income (accrual accounting) | B. 15,000 |
| <u>B</u> | 13. Net farm income (cash accounting) | C. 35,000 |
| <u>D</u> | 14. Total expenses (cash accounting) | D. 85,000 |
| <u>D</u> | 15. Total expenses (accrual accounting) | E. 115,000 |
- T F** 16. To prepare an income statement using accrual accounting, you need a beginning and ending balance sheet.
- T F** 17. An increase in the value of farm or ranch real estate that was not sold during the year should be included on the income statement as farm revenue when using accrual accounting.
- Comment: False.** A gain (or loss) is incurred when an intermediate or long-term asset is sold for more (or less) than the tax basis in the asset.
- T F** 18. Using accrual accounting, when the value of livestock held for sale at the beginning of the period is less than the value at the end of the year, the amount of the increase should be added to cash revenue to calculate total revenue.
- T F** 19. Using accrual accounting, when the value of accrued interest on the beginning balance sheet is less than the amount on the ending balance sheet, the amount of the increase should be added to cash operating expenses and depreciation to calculate the amount of total expenses.
- T F** 20. Using accrual accounting, when the value of supplies on hand at the beginning of the year is greater than the value at the end of the year, the amount of the decrease should be added to cash operating expenses and depreciation to calculate the amount of total expenses.

The answers to questions 11-15 are calculated as follows:

Cash farm revenue	\$100,000
- Cash farm operating expenses	<u>- 65,000</u>
Net cash farm income	\$ 35,000
- Depreciation	<u>- 20,000</u>
Net farm income (cash accounting)	\$ 15,000
- Decrease in grain inventory	<u>- 15,000</u>
Net farm income (accrual accounting)	0

Total expenses in this example, using both cash and accrual accounting, equal \$85,000 (\$65,000 cash farm operating expenses plus \$20,000 depreciation). The cash outlay for the tractor is not included as an expense.

Answer key 2

Calculating net cash and net farm income

Answers

1. \$59,660 *
2. \$42,660 **
3. \$ 8,000 ***
4. Overstating: \$42,660 (cash) and \$8,000 (accrual)

Name: Frank Farmer 12-month period ending: 12-31-19X1

Revenue				Cash accounting	Accrual accounting
Cash farm revenue					
Corn			\$ 101,050		
Soybeans			44,600		
Market hogs			53,760		
Breeding livestock			3,060		
Other			0		
Total cash farm revenue				\$ 202,470	\$ 202,470
Inventory adjustments					
	Inventories		Difference		
	Beg.	End.	(End.-Beg.)		
Corn	\$ 60,000	\$ 35,000	\$ - 25,000		
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	\$ - 29,000
Total farm revenue				\$ 202,470	\$ 173,470

Expenses		Cash accounting	Accrual accounting
- Feed purchased		\$ <u>-18,000</u>	\$ <u>-18,000</u>
Value of farm production		\$ <u>184,470</u>	\$ <u>155,470</u>
Cash farm operating expenses			
Interest	\$ 18,870		
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>59,660</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>42,660</u> **	\$ <u>8,000</u> ***

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