
Income Statement



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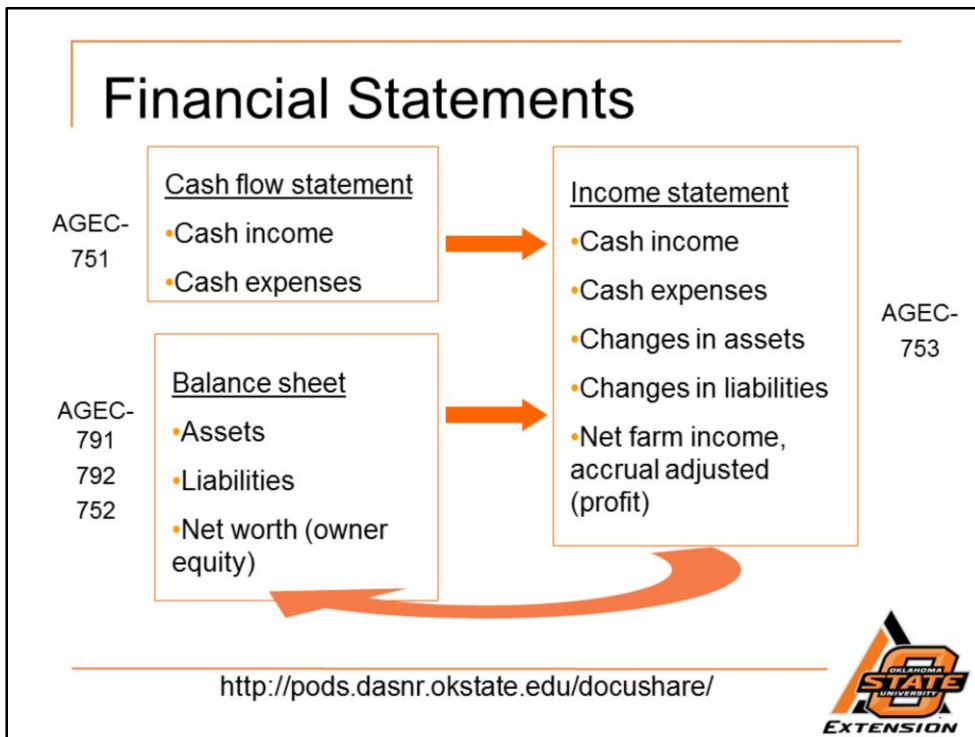
Welcome to a brief discussion of income statements. The income statement is a critical record-keeping tool in evaluating the profitability of your business. As with the other statements, you may choose whether the income statement focuses on the business only or is a combined personal and business statement. If your farm or ranch is intended to stand alone as a business, it is important to have a farm-only income statement to track the profitability of your business over time.

Definition

- A summary of revenue and expenses of a business over a specified period of time
- Measures “actions”
 - Coordinated link between two balance sheets
 - Not static like the balance sheet
- Provides an accurate measure of net income



The income statement provides a summary of revenue and expenses of a business over a certain period of time. This could be a calendar year, a fiscal year, or whatever time period is relevant for your business. Unlike a balance sheet which is static in nature, an income statement measures the flows or actions of a business. A carefully constructed income statement provides an accurate measure of net income for your business. It explains the financial flows that occurred between beginning and ending balance sheets. The income statement is also commonly referred to as the profit and loss (P&L) statement or the operating statement.



The income statement is one of three financial statements we encourage all producers to develop annually. Analysis of the income statement, beginning and ending balance sheets and cash flow statement will assist the producer in understanding financial health of the business.

The income statement shows the actions of a business over a specified period of time. This is usually one year for agricultural producers. The income statement helps to answer questions about how profitable your business is over a certain time period. A series of detailed income statements over several years will help to establish trends and pinpoint areas of concern. Beginning and ending balance sheets along with the cash flow statement will provide information necessary to construct an accrual-adjusted income statement.

The numbers in this slide refer to OSU fact sheets. The fact sheets provide more specific details. Step-by-step instructions and detailed examples are available with the fact sheets. AGEC-753 provides information about constructing a detailed accrual-adjusted income statement.

Cash vs. Accrual Basis

- Cash basis means that revenue only includes revenue (cash) actually RECEIVED and expenses actually PAID
- Accrual basis means that revenue is recorded when it is EARNED or PRODUCED and expenses are recorded when costs are INCURRED
- IRS permits farmers and ranchers to use cash accounting for tax purposes
- Profitability of business best measured by accrual accounting



Income statements can be developed on either a cash or accrual basis. Cash basis means that the revenue is only recorded when money is actually received and expenses are recorded when they are actually paid. So if you harvested wheat but stored it instead of selling off the combine, you would not include the harvested wheat on the cash-basis income statement. For an accrual based income statement, revenue is recorded when it is actually earned and expenses are recorded when they are incurred. So the harvested wheat from the previous example would be included as revenue earned in the current year. The Internal Revenue Service allows farmers to use cash accounting for tax purposes. While this may be useful for reducing taxable income, true profitability of your business is best measured by accrual accounting methods. We will focus on accrual-based income statements.

Basic Structure

- Farm Revenues → Gross Farm Revenue
- Farm Expenses → Total Operating Expenses
- Total Interest Expense
- Total Farm Expenses = TOpExp+ TIntExp
- Net Farm Income from Operations
 - NFIO = Gross Farm Revenue – Total Farm Expenses
- Gain/Loss on Sale of Farm Capital Assets
- Net Farm Income before taxes
- Non-Farm Income
- Income Taxes
- Net Income



Four main components comprise an accrual-adjusted farm income statement. Those are accrual-adjusted farm revenues, accrual-adjusted farm expenses, non-farm adjustments and income taxes. To build on these main components we compute gross farm revenue from the cash income received from regular farm operations and include revenue adjustments. Farm operating expenses include all farm cash expenditures and accrual adjustments. Total farm interest expense is kept as a separate line item from other farm operating expenses. Net farm income from operations gives an accrual-adjusted profitability measure before inclusion of capital gains or losses from the sale of farm capital assets. Many farmers and ranchers have sources of non-farm income available to their operations, so non-farm income is included as a separate line item. After including income taxes, the accrual-adjusted income statement arrives at a final net income figure. Following slides will go into more detail about each component of the income statement. Remember that OSU fact sheet AGEC-753 includes more details.

Gross Farm Revenue

- Sales of:
 - Market livestock
 - Crops
- Changes in inventories of:
 - Market livestock
 - Crops
 - Accounts receivable
- Breeding livestock revenue
- Crop insurance proceeds
- Ag program payments
- Other operating revenue



To compute gross farm revenue you will include all cash receipts from sales of market livestock, livestock products and crops. On the accrual-adjusted statement you will include changes in inventories. Revenue from culling breeding livestock is included separately from market livestock. Other sources of farm income could include crop insurance proceeds, agricultural program payments received, and other agricultural revenue. All agriculturally-related revenue will be included in gross farm revenue. The next two slides will further describe revenue adjustments and breeding livestock revenue.

Revenue Adjustments

- Revenue adjustments measure the assets earned or produced that have not yet been sold for cash
- Traditional categories
 - Market livestock and livestock products
 - Crops
 - Accounts receivable
- Adjustment procedure
 - Use beginning and ending balance sheets
 - Ending inventory – Beginning inventory



An accrual-adjusted income statement uses revenue and expense adjustments to get an accurate picture of earnings and expenses of a business over a certain period of time. Revenue adjustments are important to include for valuing your farm's production whether the products are sold or stored. Traditionally market livestock and livestock products, crops and accounts receivable may have revenue adjustments. Properly constructed beginning and ending balance sheets are critical to make accurate revenue adjustments. Subtracting the beginning inventory value from the ending inventory value will show whether you increased or decreased your inventory of that asset over the year.

We will use the example I gave earlier about storing wheat after harvest instead of selling. So if the current assets on your operation's beginning balance sheet included \$20,000 of wheat in storage and that increased to \$60,000 of wheat in storage on the ending balance sheet, your revenue adjustment is a positive \$40,000. The positive adjustment shows that you produced the wheat but did not sell it yet. To accurately measure the profitability of your operation for the year, you need to include all production, whether it is sold immediately or not. Not including the stored wheat will under-estimate your wheat revenue for the year.

A negative adjustment may also occur. If your balance sheet had the same \$20,000 of wheat in storage at the beginning of the year but at the end of the year you had \$0 of wheat in storage, the revenue adjustment would be negative \$20,000. This

demonstrates the impact of selling wheat that was produced in a previous year. Your cash receipts for wheat sales would have included the \$20,000 of wheat that had been held in storage. If you do not make the negative revenue adjustment you will over-estimate your wheat revenue for the year.

Breeding Livestock Revenue

- Separate evaluation of raised and purchased breeding livestock
- Raised breeding livestock
 - Revenue from sales
 - Base valuation change
- Purchased breeding livestock
 - Revenue from sales
 - Net of book value (depreciated value)



Breeding livestock are non-current, longer-term assets, so sales or culls are recorded separately from market livestock. Culling breeding livestock is a normal part of the livestock production process, so the revenue must be recorded. Valuation of breeding livestock differs between raised and purchased animals. Most commonly, raised breeding livestock are assigned a base value that is recorded on your balance sheet. Revenue is associated with the base value of those animals changing or the raised breeding livestock are sold. More information is available on the OSU fact sheets about assigning base values for raised breeding livestock.

If the breeding livestock are purchased, the animals will have an original cost and associated annual depreciation. Revenue from the sale of purchased breeding livestock will be positive if the sale proceeds are greater than the book (or depreciated) value of the animals.

Total Operating Expenses

- Regular operating expenses
 - Chemicals, fertilizer, seed, fuel, insurance, hired labor, rent, etc.
- Feed purchases
 - Change in purchased feed inventory
- Feeder livestock purchases
- Accrual expense adjustments
- Depreciation expense



After computing a value for Gross Farm Revenue, you will compute total operating expenses for your operation. The first expenses will include all regular operating expenses such as chemicals, fertilizer, seed, fuel and other regular expenses of operating your business. Many times this category is listed as cash operating expenses. These are the regular inputs to production that you purchase throughout the year. Hired labor is included in this category. This does not include a charge for your management expertise but includes those wages you pay to people as hired laborers. Rent payments will also be included in this category.

Feed purchases are kept as a separate line item. If you have feed in storage on the beginning and ending balance sheets and adjustment will be made here.

Feeder livestock purchases are also a separate line item. Keeping the purchase of feeder livestock separate will allow you and your lender to evaluate the value of gain associated with your operation.

Total operating expenses also will include expense adjustments and depreciation. The next two slides will further explain those areas.

Accrual Expense Adjustments

- Was the asset purchased this year but not used?
- Was the asset used this year but purchased last year?
- Was the expense incurred last year but paid this year?
- Was the expense incurred this year but not paid?
- Unused Assets Adjustments
 - Supplies
 - Prepaid expenses
 - Cash investment in growing crops
 - $-(\text{Ending inventory} - \text{Beginning inventory})$
- Unpaid Items Adjustments
 - Accounts payable
 - Other accrued expense accounts
 - $\text{Ending inventory} - \text{Beginning inventory}$



Just as adjustments were made to revenue, similar adjustments must be made to expenses to make sure expenses are charged against the appropriate year of production. Cash operating expenses include all expenditures made during the year for supplies and other purchases made for normal operation of the business. It is necessary to adjust that number relative to use of the assets purchased or payments made for operating expenses. An operator should answer the four questions listed on this slide to understand expense adjustments. For example, if the producer purchased fertilizer during the year but it was not used this year, the expense for fertilizer should be charged to next year's expenses or when that fertilizer is actually used. Or, if the producer had purchased fertilizer last year and it was used this year, the expense from last year's purchase needs to be added to this year's operating expenses. The appropriate adjustment for this example will be an unused asset adjustment. Beginning and ending balance sheet inventories of supplies, prepaid expenses and cash investment in growing crops are used to make this adjustment. Just as with revenue adjustments, subtract beginning inventory from ending inventory to determine the amount of adjustment. The unused asset adjustment will be a negative adjustment.

Accounts payable and other accrued expense accounts may have unpaid items expense adjustments. For example, an account at a feed store is typical for many livestock operations. If the beginning of year balance sheet shows \$2,000 in an account payable to the feed store and the end of year balance sheet shows \$7,000

account payable to the feed store, a \$5000 positive expense adjustment (ending minus beginning or \$7,000 - \$2,000) must be made to the operation's expenses. The operation used \$5,000 more in feed than it paid for during the year. That amount must be charged against the production of the business for this year, not next year when the bill will be paid.

Depreciation Expense

- Different methods of depreciation
- Tax purposes
 - Write-down of purchase allowed by IRS
 - Alternative methods (MACRS, GDS, ADS)
- Economic purposes
 - Straight-line



Depreciation is a regular, non-cash operating expense of businesses with depreciable assets used in the production process. Different methods of depreciation are used for different purposes. Most often an accelerated depreciation method such as MACRS is used for tax purposes to write down the purchase of the asset against taxable income as soon as possible.

Many times straight-line depreciation is used for economic depreciation. The annual depreciation amount is used to determine the “using up” or reduction of usefulness of the depreciable asset over a production year. While there is no cash expenditure for depreciation, the annual depreciation amount will be charged as an operating expense of the business. The actual amount of depreciation charged per asset in a given year will be found in your depreciation schedule of the balance sheet.

Interest Expense

- Farm Interest Expense
 - Interest paid in cash
 - Change in accrued interest payable
- Will include interest on:
 - Current loans
 - Noncurrent loans



Many agricultural operations use debt financing. Interest is the expense associated with using borrowed funds. While loan principal payments are not included on an income statement, interest expense must be included in regular expenses. Total farm interest expense includes the amount paid in cash along with an adjustment for accrued interest payable. The change in accrued interest payable will be determined by subtracting the beginning current liability value of accrued interest payable from the ending current liability value of accrued interest payable. Interest expense will be for both current loans, for example an operating loan, and noncurrent loans, such as a real estate mortgage or loan to purchase a tractor.

Net Farm Income from Operations

- Income derived from regular production and operation of farm business
- Before capital asset sales and nonfarm income adjustments
- NFIO =
 - Gross Farm Revenue – Total Farm Expenses
 - Total Farm Expenses =
 - Total Operating Expenses + Farm Interest Expense



Net Farm Income from Operations is income gained from regular operation of the farm business. It is determined by subtracting Total Farm Expenses from Gross Revenue. Total Farm Expenses includes Total Operating Expenses and Farm Interest Expense. Net Farm Income from Operations does not include any capital asset adjustments or nonfarm income.

Capital Asset Adjustments

- Sales of capital assets do not produce regular income from the production process
 - So, capital asset sales appear after NFIO
- Sale of noncurrent assets triggers gain or loss
- Sale proceeds are net of book value (depreciated value) of noncurrent asset



Capital asset adjustments occur when capital assets, such as a tractor or land are sold and a capital gain or loss is triggered. The sale proceeds net of book or depreciated value are included on the income statement. Remember that only the sale proceeds, not the purchase of the capital asset is included here.

Net Farm Income

- $NFI = NFIO + \text{Capital Asset Gain/Loss}$
- Accrual adjusted
- Farm only
- Before income taxes



Net Farm Income is determined by adding the capital asset gain or loss to Net Farm Income from Operations. This value is a farm only, accrual adjusted income measure before income taxes.

Net Income

- $NI = NFI + \text{Non-farm income} - \text{income tax expense}$
- Non-farm income
 - Off-farm wages typical
 - Interest or dividend income
 - Off-farm expenses
- Income tax expense
 - Taxes paid in cash
 - Change in accrued income taxes
 - Change in current portion of deferred taxes



Net Income is determined by including non-farm income and income tax expense. Many farm operations have non-farm income and expenses. This could be wages from an off-farm job, interest income or other off-farm income and expenses.

After all other income is accounted for, income tax expense must be subtracted. Income tax expense includes taxes paid in cash along with changes in accrued income taxes and changes in the current portion of deferred taxes.

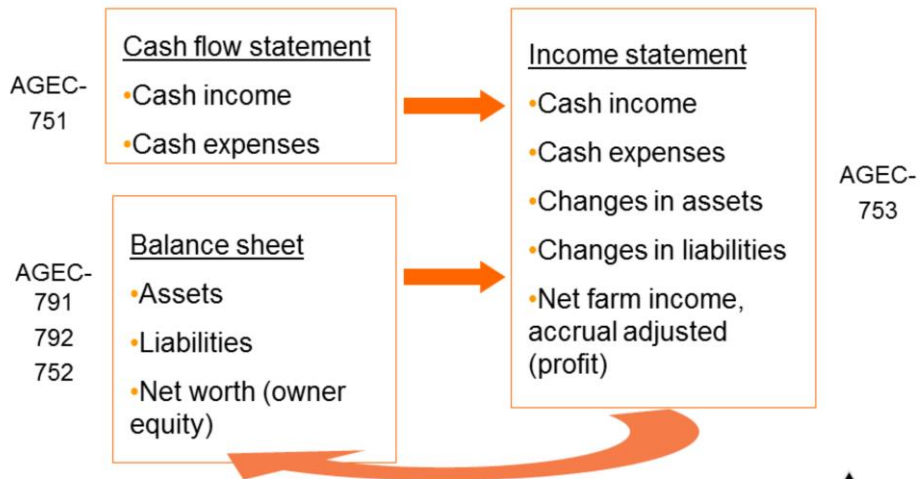
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As a review, the accrual-adjusted income statement will include Gross Farm Revenue, Total Farm Expenses, Net Farm Income from Operations, Capital Asset Adjustments, Non-Farm Income and Income Taxes before determining a final Net Income figure for the producer.

Financial Statements



<http://pods.dasnr.okstate.edu/docushare/>



The income statement is tied directly to information gained from the cash flow statement and beginning and ending balance sheets. For more detailed information on developing an accrual adjusted income statement, please visit the OSU fact sheet AGEC-753. It provides a farm example with detailed explanations. You may also be interested in software tools such as FINPACK that assist in financial statement development.

Please contact your local Extension office or area agricultural economics specialist if you would like more information or are interested in having a program on this topic in your area.