MF294

Income Statement — A Financial Management Tool

Department of Agricultural Economics — *www.agmanager.info*

K·STATE Research and Extension

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An income statement is a financial statement that measures the success of a business for a period of time in terms of net income or loss. The most common period of time for a farm business is a calendar year. Other names for this important accounting statement include profit and loss statement, operating statement, and income and expense statement.

The income statement shows the income earned during the accounting period and the expenses that are properly assignable to that period. The difference between the two is net income or net loss. The items included in an income statement of a farm business can be classified into six major headings:

- Farm Cash Receipts
- Change in Inventory Value of Crops and Livestock
- Farm Cash Operating Expenses
- Change in Inventory Value of Accrued Expenses and Supplies
- Interest Expenses
- Depreciation Expenses

Farm Cash Receipts

The principal source of farm income is from the sale of livestock, grain, and other farm products. Other income is from agricultural program payments, custom work, and patronage dividends.

Accrued income represents income earned but not yet received during the accounting period. Examples may include crop insurance or custom work income not received at the end of the period.

Changes in Inventory Value of Crops and Livestock

Changes in crop and livestock inventory values must be considered to determine gross revenue and value of farm production on an accrual basis. Changes in crop inventories take into account the beginning and ending balance sheet values of all crops and hay held for sale or feed, and the investment in growing crops. Livestock inventories take into account all market and breeding livestock, since cull cows are considered part of cash farm receipts and young "market" livestock may be entering the herd as replacements. Therefore, the inventory adjustment is made by considering the balance sheet beginning and ending value of all market and breeding livestock. If the crop and livestock inventory values are greater at the end of the period, the increase in value is added to cash farm receipts. If the inventory value is less at the end of the period, the decrease in value is subtracted from the cash farm receipts. If the total inventory value at the beginning of the period is equal to the value at the end of the period, then inventories have no effect on income.

Crop and livestock inventories are not required for federal tax returns computed on the "cash" basis. Consequently, Schedule F with your income tax return is not a true income statement for taxpayers computing taxes on the cash basis. To determine the true profitability for a period, the gross receipts as shown on Schedule F must be adjusted by changes in the crop and livestock inventories. In addition, the Schedule F gross receipts may need to be adjusted because income tax regulations require the cost of livestock and other products purchased for resale to be accounted for in the year the livestock and other products are sold.

Farm Cash Operating Expenses

Expenditures with benefits that usually expire within a year are operating expenses. Hired labor, feed, seed, fertilizer, chemicals, and insurance are examples of farm cash operating expenses.

Changes in Inventory Value of Accrued Expenses and Supplies

Changes in the inventory values of accrued expense and supplies must be considered to determine total farm expense. Accrued expense represents expenses — such as loan interest and machine hire — that are owed, but not yet paid. The difference in the beginning and ending balance sheet values for Accounts Payable/Accrued Expenses is used to determine this value. In addition, an accrual adjustment must be made for Fertilizer and Supplies that are on inventory at the beginning and ending of the year. If ending inventory is less than beginning inventory, it can be assumed that these supplies were used during the income period.

Interest Expense

The inventory change in accrued interest expense must be added, or subtracted, from cash interest paid to obtain the total accrued interest expense for the accounting period. Like depreciation, this expense is separated from other farm operating expenses so financial efficiency ratios can be determined (see publication *Financial Ratios Used in Financial Management*).

Depreciation Expense

Investments that last more than a year are called capital expenditures. Depreciation is the method used to charge-off capital expenditures in each annual accounting period for the life of the capital asset. Depreciation represents the annual loss in value of capital assets. This loss is from gradual wear and obsolescence.

Analysis of the Income Statement

The income statement represents a progress report of the business. The net income or loss as shown on an income statement shows the profitability of the business for a specific period of time. A comparison of income statements for a business over time shows the growth or decline in profitability. Net farm income averages for farms of similar size and type are sometimes available for comparison. Comparison of net farm income from one farm business to the average of other farm businesses similar in size and type can be used to evaluate the efficiency of the business.

The table on the following page presents an example of an income statement. These are available in spreadsheet format at *www.AgManager.info/Tools* named *KSU-Integrated Financial Statements*. Many of the accrual adjustments are already made in this income statement by using the beginning and ending values of the associated balance sheet. Financial efficiency ratios, see *Financial Ratios Used in Financial Management*, can be used to evaluate the relationship between accrual expenses and income. These ratios are a good indicator of a farm's ability to control costs.

For further information on farm financial management, see the following publications:

- *Financial Ratios Used in Financial Management,* MF270
- *Cash Flow Projection for Operating Loan Determination,* MF275
- *Balance Sheet - A Financial Management Tool,* MF291
- *Computation of Deferred Tax Liability*

Example Income Statement

Farm Business Receipts:		
1A) Crop Cash Sales	$ 503,518	
1B) Ending Crop Inventory	$ 83,250	
1C) Beginning Crop Inventory	$ 96,413	
1D) Crop Insurance Proceeds	$ 0	
1) Accrual Gross Revenue from Crops	$ 490,356	
2A) Livestock and Milk Cash Sales	$ 141,045	
2B) Ending Livestock Inventory	$ 332,950	
2C) Beginning Livestock Inventory	$ 332,900	
2D) Livestock Purchases	$ 5,000	
2) Accrual Gross Revenue from Livestock and Milk	$ 136,095	
3) Agricultural Program Payments	$ 46,336	
4) Accounts Receivable Adjustment	$ 345	
5) Other Farm Income	$ 13,200	
6) ACCRUAL GROSS FARM REVENUE		$ 686,332
Farm Business Expenses:		
7) Purchased Feed	$ 21,583	
8) VALUE OF FARM PRODUCTION		$ 664,749
9) Labor Hired	$ 40,907	
10) Repairs	$ 57,129	
11) Seed	$ 67,074	
12) Fertilizer	$ 90,685	
13) Herbicide and Insecticide	$ 69,358	
14) Veterinarian Expense	$ 6,760	
15) Storage & Marketing	$ 2,540	
16) Machinery Hire and Lease	$ 14,545	
17) Fuel and Oil	$ 25,709	
18) Utilities	$ 3,470	
19) Property Tax	$ 1,420	
20) Real Estate Tax	$ 4,880	
21) General Farm Insurance	$ 5,470	
22) Crop Insurance Premiums	$ 15,565	
23) Cash Rent	$ 46,240	
24) Miscellaneous	$ 11,150	
25) Expense Inventory Adjustment	$ 12,945	
26) ACCRUED OPERATING EXPENSES		$ 497,430
27A) Cash Interest Paid	$ 44,565	
27B) Accrued Interest Adjustment	$ –2,817	
27) Total Interest Expenses	$ 41,748	
28) Depreciation	$ 48,514	
29) TOTAL FARM BUSINESS EXPENSES		$ 587,692
30) NET FARM INCOME		$ 98,640

Appendix I. Income Statement Terminology and Explanations

1A) Crop Cash Sales – Revenue generated within the accounting period on sales of raised crops/hay.

1B) Ending Crop Inventory – Balance sheet value of *Crops Held for Sale and Feed* plus *Investment in Growing Crops* at the end of the accounting period.

1C) Beginning Crop Inventory – Balance sheet value of *Crops Held for Sale and Feed* plus *Investment in Growing Crops* at the beginning of the accounting period.

1D) Crop Insurance Proceeds – Any Crop Insurance payment received for crops grown using expenses in this accounting period.

1) Accrual Gross Revenue from Crops – (Line 1A + Line 1B – Line 1C + Line 1D) Gives the revenue generated from crops in this accounting period adjusted for what is kept in inventory.

2A) Livestock and Milk Cash Sales – Revenue generated within the accounting period on sales of livestock and milk.

2B) Ending Livestock Inventory – Balance sheet value of market AND breeding livestock on hand at the end of the accounting period.

2C) Beginning Livestock Inventory – Balance sheet value of market AND breeding livestock on hand at the beginning of the accounting period.

2D) Livestock Purchases – While this can be considered an expense, it is subtracted here to get a true picture of livestock revenue since purchased livestock would be added to inventory.

2) Accrual Gross Revenue from Livestock and Milk – (Line 2A + Line 2B – Line 2C – Line 2D) Gives the revenue generated from livestock and milk in this accounting period adjusted for what is kept in inventory.

3) Agricultural Program Payments – Any ARC/PLC, EQIP, CRP, Livestock Indemnity, etc. payments received within the accounting period.

4) Accounts Receivable Adjustment – Adjusts for the difference in Accounts Receivable from the beginning and ending balance sheet, making the accrual income adjustment.

5) Other Farm Income – Any other revenue received within the accounting period. Ex: Custom work income, patronage dividends, grain futures income, etc.

6) Accrual Gross Farm Revenue – (Sum of Lines 1-5) Gives the revenue generated within the accounting period adjusted for inventory changes and livestock purchases.

7) Purchased Feed – Total value of feed purchased (not raised) within the accounting period. This expense is separated from other expenses for the calculation of Value of Farm Production.

8) Value of Farm Production – (Line 6- Line 7) This value is commonly used in financial ratios (such as Asset Turnover and Operating Profit Margin) to give a more accurate picture of an operation that uses large amounts of purchased feed, such as a backgrounding or feedlot operation.

9-24) Farm Business Expenses – Account for all farm expenses in an accounting period within the given categories.

25) Expense Inventory Adjustment – This is brought in from the balance sheet, making an accrual adjustment for the difference in Accounts Payable/Accrued Expenses and Fertilizer & Supplies from the beginning to the end of the accounting period.

26) Accrued Operating Expenses – Adds lines 7 and 9-25 above. Total of all operating expenses that were used to generate the associated revenue in Line 6.

27A) Cash Interest Paid – Total interest expense paid during the accounting period.

27B) Accrued Interest Adjustment – Balance Sheet difference in Accrued Interest from the beginning to the ending of the accounting period.

27) Total Interest Expenses – (Line 27A + 27B) Gives an accrual adjusted interest expense for the accounting period.

28) Depreciation – Represents value lost on machinery/equipment/buildings throughout the accounting period. Typically follows a schedule based on useful life. (Do not use tax depreciation).

29) Total Farm Business Expenses – (Sum of Lines 26-28) Represents total accrual adjusted expenses to generate revenue in Line 6.

30) Net Farm Income – (Line 6 - Line 29) Overall profitability of the farm business over this accounting period. Represents money to pay for family living expenses or unpaid operator labor, and to reinvest in the farm business, including principal payments on noncurrent loans of the business.

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