FARM BUSINESS MANAGEMENT

FARM ECONOMICS Facts & Opinions

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# ANALYZING YOUR FARM BUSINESS

This time of year farm operators spend time in their office completing paperwork for income taxes, preparing information for their lenders and hopefully spending some time analyzing the performance of their business during the past year. Most farm operators use a calendar year (January 1 – December 31) as their business year for income tax purposes and also to prepare financial statements about their operation. Even if a business is on a different fiscal year for tax reporting purposes, they may still want to prepare financial statements based on a calendar year.

## FINANCIAL STATEMENTS

Some of the objectives of analyzing the farm business are to determine how profitable the business has been and how much increase (or decrease) in net worth occurred during the past year. The two financial statements that should be completed to analyze these aspects of the business are an accrual income statement and a balance sheet. The accrual income statement measures the profitability of the business for the year. It provides a more accurate measure of profitability then the income tax schedule F. The balance sheet measures the operator's level of ownership or equity in the business. These statements should be prepared using the same time period or point in time from year to year. The income statement typically covers the January 1 through December 31 time period while the balance sheet should usually be prepared as of December 31.

## ACCRUAL INCOME STATEMENT

An accrual income statement matches revenues with costs for a given time period, regardless of when revenue was actually received or when expenses were actually paid. For example, plow down fertilizer applied and paid for in the fall of 2001 is considered a 2002 expense for business analysis purposes even though it will be taken as an expense on the 2001 income tax return for a cash basis tax payer. This is because it will be utilized for the 2002 crop.

To calculate accrual income, adjustments are made to cash income and expenses for changes in values between the beginning and end of the year for grain and livestock inventories, accounts receivable, accounts payable and prepaid expenses. Depreciation on machinery and buildings is also subtracted off. If the accounting system a producer is using does not generate an accrual income statement, the schedule F tax form along with the beginning and end of year balance sheet can be used to calculate accrual income. To cover a 12-month period, the balance sheet should be completed as of the same date every year, preferably December 31.

Start with the net farm income figure from the schedule F tax form. This assumes the schedule F is filed on a cash basis, not an accrual basis. Adjustments are then made for the change in values between the beginning and end of year inventories of grain and livestock, accounts receivable, prepaid expenses and accounts payable. For example, if on January 1, 2001 you had $175,000 of grain inventory and on

December 31, 2001, your grain inventory was $200,000, you would have a $25,000 positive adjustment to your cash basis schedule F net income. Increases in inventory values, accounts receivable and prepaid expenses result in positive adjustments to income. An increase in accounts payable result in a negative adjustment to income. Decreases have an opposite effect on income.

Additional adjustments need to be made if you have breeding and/or feeder livestock. The gross dollar amount of breeding livestock sales on schedule 4797 should be added in. The total cost of feeder and breeding livestock purchased during the year should be subtracted off. The purchase cost of feeder livestock deducted on schedule F should be added back in as well as the amount of depreciation for purchased livestock that is included in schedule F depreciation.

**VALUING GRAIN AND LIVESTOCK INVENTORIES**

Grain and livestock inventories are generally the most significant item to consider when making these adjustments. Therefore it is very important to estimate the quantity and value of these items as accurately as possible. Grain should be valued based on the local cash market as of the end of the year with a couple of exceptions. Grain that is still eligible for government loans or loan deficiency payments (LDP's) should be valued at the loan rate if the loan rate is above the cash price. Grain in which the LDP has been taken should be valued based on the local cash market even if this is below the loan rate. LDP's that have been established but not received by December 31 should be listed as an account receivable. Grain in which a Commodity Credit Corporation loan has been taken should still be shown as an inventory item valued at the higher of the loan rate or cash price while the loan amount should be shown as a current liability.

Determining the proper value for livestock can be more difficult. Again, it is important to get an accurate estimate of the number and weight of the animals. The current cash price can be used for estimating values for market livestock. A conservative "base value" should be used for breeding livestock. A conservative base value would reflect the value for slaughter purposes rather than for breeding stock purposes. However, judgment should be used in how these values reflect on individual circumstances. This base value can utilize local cash prices but should not fluctuate significantly from year to year. This prevents net farm income and net worth changes simply due to valuation changes in breeding livestock, an asset that normally wouldn't be liquidated for an on-going business.

**BALANCE SHEET STATEMENT**

The balance sheet is used to determine the producers net worth or equity. It is a listing of the producer's assets and liabilities. Traditionally in agricultural, assets and liabilities have been divided into current, intermediate and long term sections on the balance sheet. This division is useful in determining the liquidity or ability of the farm to meet short-term obligations as well as comparing the debt structure (short or long term) to the assets of the business. Another format common in the business world is simply dividing assets and liabilities into a current and non-current section.

Balance sheets are usually completed using a fair market approach to valuing assets. This simply means that assets like land and machinery are valued at their current fair market value. A modified cost basis balance sheet lists assets at their cost or book value. For example, land is valued at original cost instead of market value and machinery is valued at remaining cost basis instead of market value. Net worth on a modified cost basis balance sheet is derived totally from earnings while a fair market value net worth includes both earned and valuation net worth or equity. A fair market value balance sheet sometimes can disguise a business that is not generating sufficient earnings because of valuation increases in assets. Earned net worth (income less withdrawals) may actually be decreasing but fair market value net worth may be increasing due to increases in valuations of land and other assets.

## SUMMARY

The accrual income statement and balance sheet are two key financial statements to analyze the farm business. With the completion of these statements, key financial ratios and other analysis can be completed to measure the direction the farm business is going financially.

Farm financial analysis tools which will help you complete an accrual income statement and balance sheet can be found at the University of Illinois *farmdoc* website. http://www.farmdoc.uiuc.edu/finance/business.html

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