

# Farm Analysis Terms

File C1-05

**Accounting** - A comprehensive system for recording and summarizing business transactions.

- **Accrual accounting** - An accounting system that recognizes income when it is earned and expenses when they are incurred, rather than when they are received or paid.
- **Cash accounting** - An accounting system that recognizes income when it is actually received as cash and expenses when they are actually paid rather than when they are earned or incurred.
- **Single entry accounting** - An accounting system where income and expenses are recorded but changes in assets and liabilities are not.
- **Double entry accounting** - An accounting system where changes in assets and liabilities as well as income and expenses are recorded.
- **Account payable** - An expense that has been incurred but not yet paid.
- **Account receivable** - Income has been earned but the payment has not yet been received.
- **Accrued expense** - An expense that has been incurred, sometimes accumulating over time, but has not been paid.
- **Prepaid expense** - A payment made for an input or service prior to the accounting period in which it will be used.
- **Book value** - The original cost of an asset, plus improvement, less the depreciation expense taken to date.
- **Inventory** - A complete listing of the number, type, and value of assets at a point in time (e.g. January 1.)
- **Depreciation** - An annual non-cash expense to recognize the amount by which an asset decreases in value due to use, age, and obsolescence.

- **Salvage value** - The market value of a depreciable asset when it is sold or removed from service.

**Appreciation** - The increase in the value of an asset due to varying economic or inflationary conditions.

- **Breakeven selling price** - The price a producer must receive for a product in order to recover all of the costs associated with producing the product.
- **Cash flow breakeven selling price** - The price needed to recover the cash expenditures associated with producing the product.
- **Accounting cost breakeven selling price** - The price needed to recover the cash and non-cash expenses associated with producing the product.
- **Economic cost breakeven selling price** - The price needed to recover the expenses and opportunity costs associated with producing the product.

**Budgets** - A written plan or estimate of future income and expenses of an activity covering a definite time period.

- **Cash flow budget** - see cash flow.
- **Capital budget** - A projection or estimate of the financial feasibility of making investments in capital assets.
- **Enterprise budget** - A projection or estimate of all income and expenses associated with a particular enterprise. It is used to estimate the profitability of the enterprise, to compare the profitability of various enterprises on the farm, and as an aid in preparing whole farm or cash flow budgets.

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- **Partial budget** - Estimates of the impact on profits of a proposed change in a portion of the farming operation. It includes only the costs and returns that change as a result of the proposed change in the operation. Because only a portion of the costs and returns are included, the partial budget provides an estimate of the relative profitability of the change as compared to the existing operation. It does not provide an estimate of the actual profitability.
- **Planning period** - The time period over which the budget is relevant (e.g. one year, one production period).
- **Unit budget** - An estimate of income and expenses for one unit of an enterprise (e.g. per acre crop budget or per head livestock budget)
- **Whole farm budget** - A projection of the total production, income, and expenses of an entire farm business.

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**Capital budgeting** - A process for determining the profitability of a capital investment.

- **Time value of money** - The difference in the value of cash received (expended) now versus its value if received sometime in the future.
- **Compounding** - Determining the future value of a current amount, in which the interest amount is added to the principal and becomes part of the principal for computing interest in the next period.
- **Discounting** - The reverse of compounding. Finding the present value of a future value by deducting the interest.
- **Discount rate** - The interest rate used to find the present value of a future amount.
- **Opportunity cost of capital** - The relevant interest or discount rate used for financial decision making. It is the rate of return that could be earned by investing in the next best alternative.
- **Present value (PV)** - The current value of one or more future amounts.
- **Capitalize** - To convert future income to current value.

- **Discounted cash flows** - The present value of a series of future cash flows.
- **Annuity** - A series of equal cash flows occurring for a specific time period with payments occurring at the end of each time period. Also called *annuity in arrears*.
- **Annuity due** - An annuity with payments occurring at the beginning of each time period. Also called *advance payment annuity*.
- **Perpetuity** - An annuity that continues forever.
- **Net present value (NPV)** - The present value of a series of future net cash flows that will result from an investment, less the amount of the original investment.
- **Internal rate of return (IRR)** - The discount or interest rate at which the net present value of an investment is equal to zero.

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**Cash flow** - Cash flowing in and out of the business. *Cash flow* is not the same as *profitability*.

- **Cash flow budget** - A summary of all projected cash income and expenditures for a given period of time, normally one year. The budget only includes cash transactions. It shows when additional funds will need to be borrowed and when funds will be available for repayment.
- **Cash inflow** - Cash flowing into the business from all sources over a period of time. Includes the sale of farm products, new loans received, sale of capital assets, and nonfarm income.
- **Cash outflow** - Cash flowing out of the business from all sources over a period of time. Includes the purchase of production inputs, machinery, repayment of borrowed money, etc.
- **Net cash flow** - The difference between cash inflow and outflow over a period of time.

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**Comparative analysis** - The comparison of the performance level of a farm business to the performance level of other similar farms in the same area or to other established standards. Also called *external benchmarking*.

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**Costs** - Agricultural costs are often divided into various categories. Some of the more common cost concepts are as follows.

- **Cash costs** - Costs that require an outlay of cash during the planning period.
- **Direct costs** - Costs that specifically identify with a particular enterprise of the farm. For example, the cost of seed corn is specifically identified with the corn enterprise.
- **Fixed costs** - Costs that do not change with the level of production. For example, the cost of owning a hog building is incurred regardless of whether the building is empty, half full of hogs, or overflowing with hogs.
- **Indirect costs** - Joint costs that do not relate to one specific enterprise but two or more. For example, the cost of a combine is a cost of both corn and soybean production.
- **Marginal costs** - The change in cost that results from producing one more unit of production. For example, the cost of producing one more hog. Only variable costs are marginal. Fixed costs are incurred regardless of whether one more unit is produced.
- **Mixed costs** - Costs that have both fixed and variable components.
- **Non-cash costs** - Costs that do not require an outlay of funds during the planning period (either opportunity costs or costs requiring an outlay of funds outside of the planning period). For example, depreciation is a non-cash cost.
- **Operating costs** - Costs for inputs and services that are used-up or consumed in one production cycle (e.g. seed and nitrogen fertilizer). Includes variable costs with a planning horizon of one production period.
- **Opportunity costs** - The cost of using a resource based on what it could have earned if used for the next best alternative. For example, the opportunity cost of farming your own land is the amount you could have received by renting it to someone else.

- **Overhead costs** - Costs that are not directly related to the type and quantity of products produced. A type of fixed cost.
- **Ownership costs** - These include depreciation, insurance, interest, taxes (if applicable) on buildings, equipment, and machinery.
- **Sunk costs** - Costs already incurred (fixed costs). For example, when a tractor is purchased it becomes a sunk cost.
- **Variable costs** - Costs that change in direct proportion to changes in volume. Variable costs can be avoided by not producing. For example, the cost of feed to feed a steer is a variable cost if the steer is not purchased.

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**Input** - A resource used in the production of an output (e.g. seed, fertilizer, feed).

**Net farm income** - The difference between total revenue and total expenses, including gain or loss on the sale of capital assets. Also called the *return to owner equity, unpaid labor and management*.

- **Gross income (revenue)** - The total income, both cash and non-cash, received from an enterprise or business, before any expenses are paid.
- **Gross margin** - The difference between gross income and variable costs. Also called *income above variable costs*.
- **Net farm income from operations** - The difference between total revenue and total expenses, not including gain or loss on the sale of certain capital assets.
- **Value of farm production** - value of crops produced (at market price), livestock production (net of feed and purchased livestock), inventory value gain or loss, and miscellaneous income. This measures the total production per farm.

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**Profit** - Gross income less expenses.

- **Accounting profit** - The value that remains after all expenses except opportunity costs have been subtracted from gross income. Also called *net farm income*.
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- **Economic profit** - The value that remains after all costs, including the opportunity costs of the operator's labor and capital, have been subtracted from gross income. Also called *return to management*.
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**Net return** - Gross income less certain expenses. Often the net return from using a specific resource.

- **Return on assets (ROA)** - The value represented by net farm income from operations, plus interest expense, minus the opportunity cost of operator labor and management. Expressed as a percentage by dividing this value by the value of total assets.
  - **Return on equity (ROE)** - The value represented by net farm income from operations minus the opportunity cost of operator labor and management. Expressed as a percentage by dividing this value by the value of owner's equity.
  - **Return to management** - The net return generated by a business after all expenses have been paid and the opportunity costs for owner's equity and unpaid labor have been subtracted.
  - **Return to unpaid labor and management** - The net return generated by a business after all expenses have been deducted and the opportunity cost of owner's equity (but not unpaid operator's labor) has been subtracted.
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**Payback period** - The length of time (i.e. number of years) it takes for the accumulated net returns earned from an investment to equal the original investment. For example, a \$1,000 investment that returns \$200 per year has a payback period of five years.

**Risk management** - The use of various management practices to reduce the production, financial, marketing, human, and institutional risks of the business. Commonly used practices include diversification, purchasing insurance, hedging or forward contracting, maintaining cash reserves, and maintaining flexibility in the operation.

**Sensitivity analysis** - A procedure for assessing the riskiness of a decision by using several possible price or production outcomes to budget the results and compare them.

**Sinking fund** - Money set aside and kept separate from other assets in a special fund. A sinking fund may be established to finance the anticipated future purchase of capital assets (e.g. combine.)

**Trend analysis** - Comparison of the performance level of a farm business to its past performance. Also called *internal benchmarking*.

**Whole farm plan** - An estimate of the intended kinds, sizes, profitability, and resource requirements of enterprises to be carried out by a farm business.

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