Allocation of Indirect Costs and Total Unit Cost

When there are multiple production activities or enterprises in a ranch operation in order to calculate the TUC for a specific production activity allocation of indirect costs is a necessary process. There is no question indirect cost or overhead is a significant cost is any ranch operation and must be managed to be competitive and select production and market alternatives.

Most all ranchers report to IRS using the Schedule F. "Profit and Loss for Farming". Setting up the QuickBooks™ software and using a class for indirect cost and general and administrative cost will facilitate recording the indirect cost. Suggested accounts to record in the indirect expenses class (see IRS Schedule F account and subaccount list below).

Car and Truck Expense
Gasoline, Fuel, & Oil
Employee Benefits Programs
Hired Labor & Management
  Salary
  Payroll Expenses
  Contract Labor (if can't be allocated directly to production activity)
  Pension & Profit-sharing Plans
Rents or Leases
  Vehicles, Machinery, & Equipment
  Land - (Cash Lease)
Repairs & Maintenance (subcategory added)
    Vehicles
    Machinery & Equipment
    Buildings & Improvements
Taxes (non IRS)
Withdrawals – Owner Operator management and labor – not an IRS deductible cost.
Conservation Expense
Insurance
Utilities
Professional Fees
Office Supplies
Administrative Wages & Payroll

Effective allocation is first dependent on effective identifying direct costs supports be accurate inventories and feed fed records. Communications with the bookkeeper and written direct and indirect assignment rules facilitate cost assignments of costs to classes for activities.

Once the indirect and G&A costs are calculated then it a process of spreading these costs between the production activities. It's not perfect science so just use a logical approach and be consistent across years. Suggest allocation include simple percent allocation by management, per acre for crops or per head days by production activity.

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Spreadsheet Operation

The spreadsheet uses the IRS account data and allocation choice to calculate cost per unit. Data can be taken for the IRS schedule F and enter the allocation criteria and quantity of units. After completing the calculations be sure and record the procedure followed to gain consisting across years.

Key Cost Definitions – Indirect Cost and Allocation - Ranch Cost Definitions for Measuring Total Unit Cost (TUC)

- **Direct Costs** are directly related to the level of the production activity. These costs go away when the production activity stops. For cattle direct cost examples are feed, yardage, veterinary medicine or health, breeding and purchased feeders for resale. For crops examples are seed, fertilizer, chemicals, irrigation and crop insurance. All retained custom ownership costs in background or feed lots are direct costs. Direct costs account for the majority of production costs in agriculture. Management can control these costs.

- **Indirect Costs or overhead** are costs that can't be assigned directly to a production activity. Many indirect costs are fixed costs. Indirect costs continue irrespective of the level of production activities. Depreciation, repair and maintenance of vehicles, machinery and equipment, labor and management, property tax are examples of indirect costs. **General and Administrative Cost (G&A) are indirect** costs that all businesses incur to cover bookkeeping, professional fees, insurance, office supplies, computer services, phone and utility costs and business travel. Administrative cost includes the salary and payroll for support personnel. Owner operator withdrawals are indirect costs. Often ignored is management time required for retained ownership activity. Retained ownership should pay part of business indirect costs. For feedyards one reason why it so important to keep pens fill is indirect costs go on they are fixed costs, whether the yard is fill or 25% empty. These costs are also referred to as fixed costs. Meaning they go on even if cattle activities are reduced.

- **Depreciation** is a top five cost in ranching and the IRS calculated depreciation is pretty worthless for calculating depreciation. Depreciation is the accounting procedure used to allocate a capital investment to the annual use cost of capital asset like vehicles, cattle equipment and machinery. Capital assets are purchases that have a productive life of more than one year. The number of years the depreciation cost is allocated each year depends on the "productive or economic life" of the asset less the **salvage value** or what the asset is worth after the **economic life** is completed. Information on capital assets is maintained in asset accounts. The tax CPA updates the depreciation schedule annually. A suggestion is to have the CPA run a "book depreciation" with reasonable productive lives and salvage value. An alternative is to use a capital asset replacement cost for assets again based on realistic productive lives and salvage value. Limiting investment in depreciable assets is important in controlling cost. If it rusts or rots you don't it is an appropriate saying. See fallowing note on IRS depreciation limitations.

- **Internal Revenue Service (IRS)** d**epreciation** is the calculation procedure that IRS requires a business to follow to calculate tax-deductible depreciation. It should be clear that the rules followed to calculate IRS depreciation **are not good estimates** of depreciation for production cost calculation. Using zero purchased breeding cattle salvage values distorts year to year actual costs for breeding stock replacement. Accelerated depreciation using Section 179 and zero salvage value for IRS depreciation distorts year to year depreciation cost when calculating total unit cost.

- **Ownership Costs** of depreciable assets include depreciation, insurance, housing and capital cost. Fuel, repairs and maintenance are operating costs. Vehicles, machinery, equipment and improvements generate ownership costs. These costs are reported as indirect or fixed costs.

- **Owner Operator Labor and Management** compensation should be included in the production cost calculation at a level equivalent to the salary required to hire a non-family member to provide an equivalent service. Compensation in excess of this amount must be considered capital distributions in order to reconcile the retained earnings and statement of cash flows. This makes a sole proprietors cost comparable to a corporate business's calculation. Owner manager costs need to be included in production costs. Many sole proprietor businesses have withdrawals for family living. Withdrawals beyond an equivalent to the salary would be an equity withdrawal on a production cost,

- **Finance cost** is the cash interest cost paid. Finance Cost is the cash spent paying interest to support the production activities. In economic analysis interest is an opportunity cost or the return expected for the next best investment with similar risk or the interest saved by paying off debt. For economic analysis interest is calculated by taking total cost adjust for the time fed (days fed/365) times the opportunity cost annual interest rate. Cow-calf economic is calculated based on ½ of operating cost times opportunity cost interest rate.

- **Total Cost and Total Unit Cost (TUC)** includes the three major cost components: 1 direct costs, 2 indirect costs including general and administrative (G&A) and management costs including owner operating management compensation and 3finance. When costs are complete TUC is consistent with the total business income statement or profit and loss (P&L) statement.

- **Yardage Cost** is used as an expression of **indirect cost** if it includes ownership (depreciation, housing, insurance and interest costs) and operating cost of facilities, repair and maintenance of machinery and equipment, fuel, labor, management, utilities, property tax and general and administrative costs. These costs are charged on the basis of head days fed and/or grazed. The "yardage concept" is used for grazing cattle or a grow yard as feedyards use for custom fed cattle.