

Finished Cattle Retained Ownership Closeout's Profitability Analysis User Manual

The purpose of this decision aid is to use **finished Cattle's** feedyard closeout data to generate a report of actual production and financial performance information in standardized formats.

The methodology incorporated in the decision aid utilizes existing closeout data generated in most feedyard reports. Feedyard reports contents are variable so this will facilitate standardization of the data used and a benchmark report. The initial work for this methodology used in the decision aids was developed by a NCBA-IRM committee in 1995 for a Stocker/Feeder standardized performance analysis (SPA).

Input Data

These closeout spreadsheets are set up to use financial data generated from a feedyard closeout. QuickBooks™ is set up by using the class feature to generate the necessary accounting data for the feeder, freight and indirect costs. The spreadsheet uses data generated from inventory and weight data and various sources for financial data. Key data is as follows:

- (1) Payweight of feeder cattle.
- (2) Payweight purchase cost of cattle.
- (3) Net payweight when marketed.
- (4) Payweight gain.
- (5) Full cost of gain – all cost including indirect or overhead and interest costs.
- (6) Payweight net sales price.
- (7) Number of head sold net of death loss.
- (8) Head days fed for the lot being evaluated.
- (9) The feed fed.
- (10) Accounting cost and revenue data for the cattle owner.

Accurate cattle inventory data is essential for accurate financial and production performance information that is useful to evaluate the production and marketing system performance. For reporting lots and the total business financial statements. Information on performance can be used to improve future decision making and help prevent repeating errors.

Feedyards closeout reports include all direct costs incurred at the feedyard level. The value placed on feeder cattle in most often is a purchase cost or estimated market value. This decision aid facilitates the **“cattle owner”** to also do an analysis with the accumulated costs of the feeder plus freight to the feed yard.

Operation of the Spreadsheet

All data is entered into the first and second sheet. All cells in blue are unprotected and should have values or a zero. Care must be taken to ensure all data from the different sources is complete.

Note: *When saving lot data each lot needs a unique file name and is saved by using the “save as” command. It is useful to identify files by lot and date of data entry.*

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Reports

An area of information not communally observed is closeout performance evaluation of where the margins are earned and stresses the importance of marketing when retaining cattle ownership. These margins are defined as follows:

Marketing margin is the net payweight sales for the weaned calf or purchase payweight of the stocker (feeder) based on sales and inventory adjustments times buy/sell margin or the rollback or roll-up (positive or negative margins between cost of buying and selling price). For a negative marketing margin, the cost of gain has to be less than its market price (sales price) to have a positive net income.

Feeding margin is the sales price minus the cost of gain times the net payweight gain. It is a measure of how much the value of gain exceeds the cost of gain. Under normal buy-sell prices, there is a negative marketing margin. The feeding margin must offset this negative margin for the enterprise to generate a positive net income. To generate a profit, the marketing margin plus the feeding margin must be positive.

The most important product of the cattle cost accounting system is the cost of gain as it measures both efficiency and competitiveness of finishing cattle. The sum of marketing margin and grazing or feeding margin is profit per head.

Annualized Net Return on Assets (Capital) Financial ROA is the annualized return on assets (ROA) and is the net income plus cash interest cost plus the target margin objective divided by annualized capital (asset) requirement to support the enterprise. Capital is adjusted for the time cattle are fed.

The reason interest is added back in the ROA calculation is that it had been calculated out in determining net income. Interest represents a cost of capital, so it must be added back to net income to calculate an income before interest to determine what net income is capital.

Key Closeout Definitions

Annualized Net Return on Investment ROI is the annualized return on investment (ROI) is the net income plus cash interest paid divided by annualized capital investment requirement to support the cattle feeding activity. The reason interest is added back is interest paid represents a return the debt capital. ROI is a return to capital invested irrespective of capital ownership. Capital is adjusted for the time cattle are on feed. Investment required is estimated by taking one half of the investment is non-cattle costs plus the total payweight cost of the feeder cattle times days on feed divided by 365 days. A low ROI is due to high feeder cost relative to sales value, high feeding costs of gain, poor production performance or a combination of these factors.

Average Daily Gain (ADG) is the net payweight weight gain divided by head days. This weight is adjusted for death loss (deads are in) as only live cattle payweight are counted. Average daily gain is total saleable net gain divided by head days fed.

Breakeven Cost is a cost component divided by the amount of saleable product. The costs included **must be defined** before a breakeven can provide useful information to a decision maker. **A break-even that does not cover full cost is misleading.** Custom feedyards **never calculate** a “full cost” breakeven as they do not have access to costs cattle owners’ costs beyond the direct costs incurred in the feedyard. Their breakeven is a feedyard direct cost breakeven. Producers must use closeout information and add the full payweight cost of the feeder and the cattle owner’s business’s general and administrative (G & A) costs including management cost. They must have **total unit cost** to have a true measure of profitability. Having G&A and actual interest cost will mean the cattle feeding activity profitability and TUC is consistent with the business income or profit and loss (P&L) statement.

Direct Costs are expense items that are directly related to production activity such as feed, yardage, health and feeder cost. All retained ownership costs in feedyards are direct costs.

Death and Cull (Railers) Losses are reported together as neither result in finished cattle sales.

Cattle Owner Management cost or compensation should be included in the production cost calculation at the manager’s salary lever or a level equivalent to the salary required hiring a non-family member to provide an equivalent service. Cattle owner’s management costs need to be included in costs as compensation for feeding and marketing decisions.

Economic Cost is in addition to the financial or accounting cost, an opportunity cost that is charged for equity capital (what it would earn in an alternative investment or by how much it would reduce interest if used to repay debt). Opportunity cost represents the return that could be received for a resource in its next best use. Economic cost represents the cost “if all resources” earned their opportunity cost or a use forgone.

Feeder Price That Could Be Paid – in the closeout this is a calculation that with the results of sales revenue and costs what could have been paid for the feeder going in to the production and marketing activity and total unit costs (TUC) be covered. This can then be compared to actual cost of the feeder to calculate over or under payment for the feeder.

Financial Analysis focuses on determining the accounting cost (cash and non-cash), profitability or change in equity, and repayment capacity of the enterprise or business being evaluated.

Financial Costs include cash costs, depreciation, and non-cash adjustments, such as accounts payable, accrued interest, etc. These costs are recorded and reported in the business accounting system. The financial cost **does not** include opportunity cost of resources like lease equivalent or owned land and interest on equity capital.

Freight Shrink is the extra shrink cattle suffer when they travel long distances. The time and feed required to recover will reduce performance and increase cost. This should be a factor of consideration in reviewing and comparing close outs.

Freight or Trucking Costs are a marketing cost and reduce the gross revenue or the net payweight price received for cattle. They should not be included as a cost of gain.

Feeding Margin is the net feeder sales price minus the total cost of gain times the net payweight gain. This is a measure of cost of gain versus the sales value of finished cattle.

General and Administrative Cost (G&A) is the costs that all business incurs to cover book keeping, professional fees, insurance, office supplies, computer services, phone and other utilities cost. Administrative cost includes the salary and payroll for hired of owner management. There is management time spent on planning, implementation and marketing issues for the cattle feeding retained ownership activity.

Indirect Costs is necessary to include to ensure production activity costs match up with the business P&L This includes ownership and operating costs. Depreciation, repair, maintenance of improvements vehicles, machinery and equipment, labor and management, and property tax are examples of indirect costs. Indirect costs continue as the number of cattle increase or decrease. **General and Administrative Costs (G&A)** are included in indirect costs to run the business such as bookkeeping, professional fees for accounting and legal services, dues, utilities, general insurance, office supplies and administrative personnel salary, and payroll and benefits. There is management time spent on planning, implementation and marketing issues for the cattle custom feeding retained ownership activity. Indirect costs are also referred to as overhead costs or fixed cost.

Indirect Costs are the costs the **custom feedyard incurs** and are covered by the head day yardage charged to the customers cost. Indirect costs include ownership and operating cost of facilities. Depreciation, repair, maintenance, of the yard vehicles, machinery and equipment, labor and management, utilities, property tax are examples of operating costs. General and administrative costs are indirect cost. One reason why it so important to keep pens fill is many indirect costs go on, are fixed costs, whether the yard is fill or 25% empty.

Payweight Price is the net income from sale after adjustments for freight and marketing costs. Payweight is the net weight after shrinkage for the cattle.

Marketing Margin is the initial feeder payweight times the roll back or roll up in price or the positive or negative margin between initial feeder price and the finished cattle sales price.

Net Payweight Gain is the difference between net sales or payweight and weaning weight.

Net Margin or net income is the difference between the value of the net sales and the original feeder value and added cost for production, G&A and financing cost. If these costs are included this is **total cost or total unit cost** per head or per cwt. of cattle marketed. The net margin is made up of two components, marketing margin and feeding margin.

Net Payweight Sales Revenue is the revenue received per cwt after shrink and all freight and marketing costs are accounted for.

Payweight In is the net beginning payweight weight. Off truck weight at arrival at the feedyard is irrelevant in cattle feeding production and economic performance analysis. As its payweight that counts in the end.

Payweight Out is the net weight out after shrinkage (deads are in). In other words, it is net-to-net payweight. Feedyard performance with deads out is wrong and just distorts reality.

Preconditioning and Backgrounding is often used interchangeably. This is the phase of production between weaning and selling or transferring to a feeder or finishing phase of production. Preconditioning is a 30-60-day period. Backgrounding is normally used to describe cattle that are confinement fed for a longer period between weaning and sale as feeders.

Profit (Loss) care must be exercised in reading reports in the cattle sector labeling the value profit or loss. Most frequently in feedyard and other cattle reporting, these numbers are gross margins (gross revenue minus direct feedyard costs) and do not include overhead and owner labor and management costs, which are required to calculate a true profit or return to business equity. Feedyard closeouts reports interest for costs financed by the feedyard but not financed by the cattle owner's sources.

Rate of Return on Investment (ROI) can also be called return on assets. This ratio gives an indication of how productively the assets are being utilized. A low return on assets could indicate inefficiencies in the use of assets; low net income due high cattle cost, high feed costs, poor production performance or low cattle sales price or a combination of these factors. See annualized net return on investment above.

Roll Back is a term to describe the difference between the net payweight price of finished cattle and their payweight feeder purchase price or cost. This is the cost per cwt. weight on the beginning weight that has to be overcome by cost of gain to make a profit.

Sunk Cost – is used to describe a cost that has incurred or has taken place that cannot be reversed. At the weaning time the costs to produce the calf are sunk costs. These costs do not determine if the weaned calves should be retained or not. It's a question will the added revenue be greater than the added costs from retained ownership in greater than just selling the unweaned calf.

Total Unrealized Sales Value (opportunity cost) is the net sales revenue that is projected if the calves are sold at weaning after shrink and marketing costs. The weight, price and marketing costs are critical in determining net payweight and payweight price.

Yardage Cost is used as an expression feedyard indirect cost that include ownership and operating cost of the feedyard and general and administrative (G&A) costs. These costs are and charged on a per head basis to individual lots. The sum of direct costs and yardage when combined with financing cost would be the feedyard's total unit cost. Some feedyard's markup feed to cover all or a portion of yardage costs.

Value of Gain versus Cost of Gain

For retained ownership feeder in cost or price must be offset by lowers cost of gain costs of weight gain to be profitable. Value of Gain is the net retained income minus the net total cost value divided by the net sales payweight. The value of gain must be greater than the cost of gain to be profitable market alternative. The formula is as follows: For value of gain per Lb. = $((\text{Net Sales Value} - \text{Total Costs}) / \text{Net Payweight})$.

Calculations of Feedyard Margins

To accurately calculate these margins for evaluation of growing and finishing alternatives, decision makers need the following data:

1. Payweight of weaned calf, stocker (feeder) cattle.
2. Payweight purchase or accumulated cattle costs.
3. Net payweight when marketed.
4. Payweight gain.
5. Full cost of gain – all cost including overhead and all interest cost.
6. Payweight net sales price.
7. Number of head sold net of death loss.

The formulas for calculating margins are as follows: **

Marketing Margin (\$/hd) =

$$((\text{Total Purchase Payweight} * .01) * (\text{Sales Price} - \text{Purchase Cost})) / \text{Head Out}$$

Feeding Margin (\$/hd) =

$$((\text{Sales Price} - \text{Cost of Gain}) * \text{Net Gain} * .01) / \text{Head Out}$$

Net Income (\$/hd) = Marketing Margin + Feeding Margin

** All prices and costs are in \$/cwt, weights are in pounds, and margins are dollars per head out. Payweight to payweight accounts for death loss.

You Achieve Nothing Breaking Even through Retained Ownership You achieve nothing financially by breaking even in finishing cattle. Yet, retained ownership and feedyard projections most often calculate breakeven as if it were the ultimate goal. It is extremely important to understand what is included in the cost to arrive at breakeven or net returns. Most calculations of retained ownership are direct cost of production. Nothing is included in the indirect costs to cover overhead, owner's labor and management (living withdrawals) or taxes. Your business will go broke if there is no income to pay indirect or overhead costs.

Breaking even is financial failure as a business is not financially sustainable if net price merely covers costs particularly to incomplete costs often reported in the cattle sector.

Source of beef decision aids:

**Texas A&M University - Department of Agricultural Economics – Agri-Life Extension
Beef Cattle Decision Aids**

<http://agecoext.tamu.edu/resources/decisionaids/beef/>