Evaluating Preconditioning Profitability - Projection and Closeout Manual*

This user manual describes the methodology for a cow-calf producer to evaluate the profitability of preconditioning calves to forward pricing or contact or special program cattle precondition markets. These decision aids facilitates data organization and analysis of preconditioning total cost, net income (profit) and return on investment (ROI). Spreadsheets are organized into three groups including: 1. Profit projection and 2. Closeout after the cattle are sold.

With the growth of "program cattle" marketing preconditioning is part of their program. A separate spreadsheet is available to record the added investment and associated costs. Source and age verification are part of these marketing alternatives. This cost must be included in this spreadsheet's "Record, Verification &Tag $/Hd." as part of costs. Care has to be taken to included expected cattle premium prices. This decision aid does calculate the price slide for the increased weight difference of the preconditioned cattle. This decision aid does facilitate "what if" evaluation of marketing alternatives.

Separate Spreadsheets are available for raised and purchased calves' projections on one page providing focused profit evaluation. Profit level is input and the ROI is calculated as a guide to setting a profit objective. The graph helps put the different production costs into proper perspective.

Supporting Spreadsheets for development of data to support the projections (see Appendix A). These spreadsheets facilitate the calculation, feeding facilities, labor and management and feed and health costs. The pickup and trailer Spreadsheet can be used to calculate freight costs. Marketing commissions, consignment fees differ by marketing option evaluated and are important to record.

Sheet 3. facilitates calculation of the weight-price slide important in negotiation term of forward selling program cattle. The aim is the have a complete preconditioning cost and net payweight price.

When negotiating cost-plus pricing and weight-price slides it's very important to have a full cost. Cattle buyers do not know or have the responsibility to know producers' costs. Special sales representatives can be more effective in motivating participation if they know the cost of preconditioning. Share the cost of information is the opportunity comes up.

Preconditioning calves means the cow-calf producers take the death loss, health and production performance and feed cost risk. There is added price risk if cash sales markets are used. **The calf value at weaning accounts for 80- 90% of total preconditioning cost. Don't try to save on the 10% of costs, mostly health and feed and labor and management costs that make preconditioning successful.**

The weaned price level and the change in preconditioned price including premiums, adjustment for weight price slide, and market price change during the preconditioning period. These price changes are the most important factor to determine profitability. When the activity is completed **doing a closeout** and analyzing the results can provide greater insight into performance and price change. It will also help prevent future errors in choice of market alternatives.

There is a great deal of information on production and management practices for successful preconditioning from the specialized marketing firms and Extension professionals. For the beginner getting the local veterinarian involved is essential to prepare the health protocol and feeding program.

Spreadsheet Operation

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All variables are in **blue** for users to input their data. The example data are **only for illustration purpose**. It is advisable to save the user prepared alternatives with a name and date when revised.

Closeout – Measuring Actual Profitability

Equally important to doing projection before participation in precondition for specialized markets is to measure the actual results of preconditioning. Other than facing reality with real numbers this information facilitates projecting and evaluating alternative markets. Benchmarks based on historical experience are valuable information to improve decision making. The Spreadsheet for closeout uses similar data requirements but uses the sales results and actual health and feeding requirements and costs.
QuickBooks ™ is the preferred accounting software to accumulate revenue and cost data. Setting up classes in QuickBooks™ to accumulate direct cost is very efficient.

Cow-calf Producers Preconditioning for Retained Ownership

There is little question that when retaining ownership of the weaned calves, preconditioning for the stocker or feedyard phase is a financially sound decision. Preconditioning is a necessity, as it will lead to improved performance, reduce death loss and cost savings to offset the added cost. Producers just need to make sure that preconditioning is "done right," to send healthy calves to the next phase of production.

Be sure to have a veterinarian review the health program. Any attempt to save cost on the health program cannot be justified given that it's a minimal cost compared to the value of the calves.

Cost of gain is much lower in the stocker, backgrounding or feedyard finishing phase than in the preconditioning phase. The focus is not on high preconditioning weight gain but producing healthy calves for the next phase of production. In the retained ownership economic projection needs to add the preconditioning cost to the budget for the weaning through the final phase of retained ownership. It is simply an additional cost to the feeder cattle. It's like adding the freight expense of shipping the cattle to the feedyard. Make sure that the projected financial performance includes the preconditioning cost as part of the cost of cattle.

When the feedyard closeout comes back from the feedyard use the net payweight value of the calf at weaning plus the preconditioning cost for the in cost of cattle delivered to the yard. To calculate retained ownership closeout profitability the cattle owner must include the preconditioning costs.

Cow-Calf Producers Selling Calves

Preconditioning is a "profitability question" for cow-calf producers selling calves. The question is always **"Will the added preconditioned value cover the added cost of preconditioning?"** Preconditioning takes more management. When preconditioning the producer takes more production risk than selling unweaned calves. If not, forward prices there is added price risk. When evaluating preconditioning the target profit and Return on Investment (ROI) should reflect the added risk reality. With low feeding cost the price slide as calves gain weight is critical as the reduced price with the heaver weight can offset the price premium. The marketing cost associated with marketing alternatives is very important in determining net payweight price.

The premium paid is not necessarily a full cost compensation to the cow-calf producer by the calf buyer. The preconditioned calf buyer is not going to give up "all the benefits" for buying preconditioned cattle.

If they were willing to do that, they might as well do the preconditioning themselves and take the price and health risk. Many feedyards, of course, feed cattle that are not preconditioned, so they know the costs and benefits of preconditioning well.

There are several **keys to a profitable calf preconditioning** program for ranchers.

1. Have a plan that defines the health and feeding protocol, reviewed by a veterinarian that will meet the defined preconditioned calf market. Be prepared to follow the details to insure the program is implemented.

2. Make sure the paper work and communications are completed in a timely and orderly manner so the premium can be achieved from the selected preconditioned calf market.

3. **The importance of the preconditioned calf selling price and premium versus the value and unweaned calf cannot be over stated**. Timing of the sale is important if preconditioning into a declining calf market in the fall can eliminate potential profitability. Cost of gain is high during the precondition period. The price discount on unweaned calves relative to preconditioned calves is difficult to see in traditional published price data. Efforts to communicate the price difference would be valuable to decision makers for those operating special preconditioning markets.

4. **Payweight price slide is the adjustment in price as weight increases that takes place during preconditioning for cash markets. As feeding cost decreases the weight price slide increases.** The reason this takes place as feeder weight increases because the buyer has less low-cost weight to add to finishing cattle. Low feed costs increase the favorable feeding margin. There are times (like in the fall of 2015) when the weight price slide will more than offset the price premium in the special preconditioning cash markets. It's very important to negotiate price slide in selling preconditioned calves using forward sales contracts.

5. Marketing costs including freight, commission and fee need to be known to do projections and included in closeouts as they differ by market alternatives.

6. Make the effort to calculate the full cost of preconditioning. This includes facilities cost, indirect or overhead, and owner labor and management cost. There is no way a producer should precondition calves to just breakeven. Breaking even is a failure for a production alternative that takes extra management and incurs added production and price risk. **Select a target ROI or profit when deciding to precondition or sell unweaned calves. This is the profitable business approach.**

7. Ranchers that can sell loads of preconditioned calves have definite advantages in the video and internet market for these cattle.

To make preconditioning work, "profitable", the cow-calf weaned calf seller must use production and marketing practices that insure that the added revenue is greater than the added total cost. Each marketing year and set of cattle is different. Measuring performance, costs and profitability will keep management focused on performance.

Purchasing Unweaned Calves to Sell Preconditioned

The same condition to insure profitability for raised calves is true for calves purchased. However, there is a limited control over the health and management when calves are purchased so performance has a higher risk. Calves bought in auctions have been subject to additional stress and disease exposure than raised calves. The importance of knowing cost and production risk is critical as **"you buy a profit or loss"** when the calves are purchased. This is why these calves are called **high risk calves**.

Value of Gain versus Cost of Gain

Preconditioning involves high costs of weight gain because of a low rate of gain during a short feeding period. This means that the value of gain must be greater than the cost of gain to be a profitable market alternative. **Value of Gain** is the net preconditioned income minus the initial net unweaned calf value divided by the net sales payweight. The value of gain must be greater than the cost of gain to be profitable market alternative.

Preconditioning premium required is the price necessary to achieve a profit margin to justify the cow-calf producer to precondition calves rather than market them unweaned. In this decision aid the user inputs the target profit per head desired. The return on investment is calculated as well and the necessary premium required to meet the target profit and ROI. The price of the preconditioned calf will cover Total Unit Cost (TUC) plus the target ROI desired is the necessary net payweight price. Recall industry reported price premiums are prior the marketing commission and other marketing cost adjustments.

Data Requirement to Measure Preconditioning Profitability

To accurately calculate these margins the decision makers, need the following data:

a. Weaning weight and payweight (weight after marketing shrink) of weaned calf for marketing alternatives
b. Payweight weaned value of calves for marketing alternatives
c. Net payweight when marketed by preconditioned alternatives
d. Total unit cost – all costs including direct, indirect or overhead, labor and management and interest
e. Payweight net sales price when preconditioned
f. Number of heads sold net of death loss

Calf Marketing Valuation – Cost of Raised Calves – It's a Sunk Cost

Market valuation is determining the net payweight value of calves marketed at weaning and not preconditioned. In other words, what could be expected if the calves were weaned and sold? This is the payweight times the net price. **At the weaning time the actual costs to produce the calf are sunk costs. As it cannot be changed**. This is why the net market value of the calf at weaning becomes the in value for preconditioning budgeting purpose.

Marketing costs for alternatives are relatively stable and a few phone calls can establish these to net prices of alternatives close to the date of weaning. Take care to document the prices information on a consistent basis, as this is valuable information for the next budgeting exercise. **This is where doing the closeout becomes valuable.**

Having good accurate ranch weights and measured shrink by marketing alternative is valuable information for evaluating alternatives. **The closeout has this information recorded.**

Seasonality of Calf Price – It's Important as is Weight Price Slide

Although often not noted in preconditioning evaluations, the added price risk that cow-calf producers take can be very significant in determining the economic results. Seasonality in feeder calf prices is a reality. It is a matter of supply and demand. The majority of feeder cattle come to market in the fall from spring born calves, causing the price to be lower. Preconditioning October weaned calves to sell in November or December frequently is a favorable pricing strategy. Since the preconditioning cost of gain is high it can be a losing proposition to hold the calves and marketing time into a declining market without an offsetting price premium. The necessary premium to reach the profit and associated ROI is calculated to in this Spreadsheet.

On the day of the sale contact a sale representative to get market weight price slide and premium for the day of sale. This is recorded in the closeout**.**

Economic Evaluation Methodology Considerations

These computerized decision aids provide for a total cost analysis of the preconditioning activity. Owner operator's labor and management are included, as well as depreciation of facilities and machinery, repairs, and operating costs.

In thinking through costs, first consider all the direct or variable costs that are a result of the preconditioning activity (vaccination, worming, feed, etc.). These costs would go away if the enterprise were not carried out. Every ranch enterprise should also pay a share of the indirect costs or overhead – office, accounting, and general overhead. These costs can be allocated on a per head basis adjusted for the number of preconditioning days. Realistically short production activities cannot be expected to contribute much too indirect costs. Limited seasonal use of specialized grow yard facilities makes their yardage cost high.

It is important include a cost or return to owner operator labor and management. Owner labor and management should be compensated at a level equivalent to the salary required to hire a non-family member to provide an equivalent service." This owner labor consists of that amount of time that is spent on the daily operations required by the practice. Management must time spent time evaluating alternative practices, implementation and marketing plans for profitable preconditioning.

Preconditioning activity requires additional capital and the revenue that is normally received at the time of weaning is delayed for the duration of the preconditioning period. To recognize the added financial cost of capital calculates an interest charge associated with the delayed sale. This would be a return to equity capital if owner capital is used, or would cover cash costs if borrowed capital were used.

The weaned price level and the change in price including premiums, adjustment for price slide, during the preconditioning period is the most important factor to determine profitability. When the activity is completed doing a closeout and analyzing the results can provide great insight into production and financial performance. And prevent future errors. In reality closeouts are seldom done! It's a missed opportunity.

It is important to communicate accurate and complete costs. Too many contracts and "deals" of all sorts are negotiated with cow-calf producers where "only cash" costs are considered.

A Spreadsheet is available that facilitates doing a closeout for a lot of preconditioned cattle. It is important to learn what worked and what did not meet expectations.

You Achieve Nothing Breaking Even through Retained Ownership

You achieve nothing financially by breaking even in preconditioning, backgrounding, stocker or feeding 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 direct cost of production. Nothing is included in the cost to cover indirect costs or overhead, finance, owner's labor and management (living withdrawals) or self-employment and income taxes**. Your business will go broke if there is no income to cover total costs.** Business profitability is measured with the business accrual adjusted income statement.

In projections, establish your target net return and determine what sale price is necessary to cover total costs to justify taking on the additional risks. It is good to consider at least three levels of possible outcome (pessimistic, likely, and optimistic prices). Calculate what the target net return to risk (profit) and equity capital will be for each price situation. Always remember you achieve nothing by attaining breakeven that only include the direct cost of production.

In the cow-calf sector, an asset driven business, reporting only cash cost and return above cash costs does a disservice to the industry. Disregarding depreciation and compensation for owner operator labor and management makes financial performance information worthless.

Achieving cash or only direct cost breakeven is financial failure as a business is not financially sustainable if net price merely covers direct or cash as costs as often reported in the cattle sector.
In a financially sustainable ranch business earned equity (equity increase above land appreciation) must grow over time. That is, a positive rate of return on assets (ROA) is attained over a number of years.
Preconditioning can contribute to business profitability if added revenue is greater than added cost – that's total cost!

Glossary Preconditioning Financial Terms
Annualized Investment and Finance Cost – Operating capital requirement is estimated by taking one half of the non-cattle costs plus the total payweight cost (value) of the cattle times days fed divided by 365 days. This is the annualized capital required for the production and marketing activity. If financed the interest payment is calculated by the annual interest rate. Annualized investment is used to calculate return on investment and equity.

Facilities Cost is the cost of ownership (depreciation) and operation of facilities, machinery, equipment, vehicles, etc. to feed and care for the cattle. Labor and management are recorded separately in a budget. Facilities costs are seldom known or calculated at the cow-calf level. Feedyards charge daily yardage for custom fed cattle. The accounting system should be set up to record facilities cost. A separate Spreadsheet is provided to calculate this facilities cost (see source on next page).

Preconditioning and Weaned Calves are often used interchangeably. This is the phase of production between weaning, and selling or transferring to a stocker or finishing phase of production. Unweaned calves, off the cow, and weaned or preconditioned are terms that often get mixed up. The best way is to describe the calves as preconditioned and the number of days after weaning is made clear. Health and feeding protocols need to be written to inform buyers.

Price Premium Required is the price premium necessary to cover the added cost of preconditioning and the original value of the calf at weaning. If cost calculations were completed following this analysis, premiums above this would be a profit or return to equity capital. A premium below this value would mean the producer does not cover full costs for resources devoted to preconditioning. Recall the quoted premium is quoted before commission and other marketing costs are subtracted.

Price Roll Back is a term to describe the difference between the net payweight price of cattle and their payweight 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. Preconditioning must have a **price roll up (price increase and premium) to be profitable.**

P**rofit (loss)**. Great care must be exercised in reading reports in the cattle sector labeling the value profit or loss. Most frequently in the beef sector, these numbers are gross margins (gross revenue minus direct costs) and do not include indirect or overhead and owner labor and management costs, which is required to calculate a true profit or return to business equity.

Profitability is the ability of the ranch business or enterprise to generate accrual-adjusted income (adjusted for inventory change and accounts payable and receivable), in excess of total accrual adjusted expenses. Profit is the net income to equity capital. A profitable business has equity growth reported in the income statement as net ranch accrual income and balance sheet equity as retained earnings and change in equity.

Return on Investment (ROI) is the net income plus cash interest paid divided by annualized capital investment requirement to support the cattle activity. The reason interest is added back is that 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 in 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 calf value (opportunity cost) relative to the preconditioned sales value. Recall the cost of the unweaned calf is 80- 90% of total cost of production.

Sunk Cost – is used to describe a cost of raising the calf that has incurred or has taken place that cannot be reversed. At the weaning time the costs to produce the calf are sunk costs. For retained ownership evaluation it's a question if the **added revenue** be greater than the added costs from retained ownership are greater than just **selling the unweaned** calf or total unrealized sales value or opportunity cost of a sale. When producers have accurate complete cow-calf level costs they can be compared to net **market price** to evaluate if calves could be purchased at a lower cost than raised cost. The business income statement reflects the cow-calf costs to calculate business profitability.

Total Unrealized Calf 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.

Key Marginal Decision Information for the Detailed Closeout Analysis

Preconditioning is by definition a marginal business. Preconditioning involves high costs of weight gain because of a low rate of gain during a short period. This means that the cost of gain is usually greater than the sales price, resulting in a negative feeding margin. A positive roll up in price (premium or market increase) is needed to offset the negative feeding margin in order to realize a positive profit margin of net income. Margin terminology is as follows:

Marketing margin is the weight of the weaned calf times the difference between the weaned value and the preconditioned selling price (a positive price rollup). The marketing margin must be positive to offset the high cost of preconditioning. Producers need a positive marketing margin when preconditioning cattle. This can come from premiums and/or an upward trend in prices.

Preconditioning grazing and/or 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.

Net Margin to generate a positive margin (**profit**), the marketing margin plus the grazing and/or feeding margin must be positive.

Appendix A: Source of supporting Decision Aids

Texas A&M University - Department of Agricultural Economics – Agri-Life Extension
Beef Cattle Decision Aids - http://agecoext.tamu.edu/resources/decisionaids/beef/

K. Preconditioning Profitability Decision Aids
Projection, Closeout and Supporting Spreadsheets