

Cow-Calf Production Data Supporting Fiscal Year Financial Closeout Summary

For producers using the **Schedule F (Form 1040) Profit or Loss from Farming** for IRS compliance this spreadsheet facilitates development of an **accrual adjusted income statement** that measures the business profitability that is not a product of the Schedule F report.

A summary of the fiscal year revenue for the cow-calf and retained ownership production, sales and transfers is valuable to measure net income but for providing data for compliance with IRS.

This decision aid can be used to record the data necessary to **match income and expenses** for the fiscal year to measure profit. See appendix A. for a suggested chart of accounts to facilitate reporting sales. The spreadsheet report combines calf weaned production and valuation of retained calves and sales or transfers to replacement. Retained when calves are valued at expected net payweight if the calves were sold. Final sales value can be compared to the initial weaned valuation. The difference in valuation can be compared to costs to achieve market alternatives value increase to measure the profitability of alternatives.

There are three sheets in the spreadsheet that are used to record and calculate the values to make the adjustments in cash revenue reported in the Schedule F cash data.

These spreadsheets provide the of sales data, accrual adjustments, data for the preparation of the market valued balance sheet and reproduction data to calculate benchmark values for the cow-calf herd. Provides depreciation data necessary to update the ranch depreciation schedule. The capital replacement cost calculator can be used to calculate depreciation if “book” depreciation is not available.

1. Cow-Calf Sales by Category of Cattle.
2. Cattle and Horse Beginning and Ending Annual Inventory. Reports sales of both raised and purchased breeding stock and death loss.
3. Standardize Performance Analysis (SPA) Herd Reproduction and Production Data.
4. Cow-Calf Herd Production, Sales, Death Loss and Transfer Data Summary
 - a. Calculates the “base value” change for raised breeding stock.
 - b. Summarized income and values for the balance sheet.
5. Feed Beginning and Ending Inventory.
6. Depreciation Data Records for Capital Assets Depreciation Schedule (3 spreadsheets). Has breeding stock purchase and sales data.

Addressing Depreciation Data and Calculation Needs

7. Replace IRS Depreciation with Capital Asset Calculated Replacement Cost.

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Decision aids provide data needs for the summary of different sections

Cow-Calf Sales, Production Data and Base Value for raised breeding stock.

Production and sales - decision aids address these data needs.

- Cow-Calf Sales by Category of Cattle.
- Cattle Inventory – Death Loss and Breeding Stock Sales and Purchased
- Reproduction Performance Weaning Results Based on Exposed Females
- Weaned Calves Production and Value at Weaning and When Sold or Retained Inventory
- Raised Breeding – Replacement Heifers – Transfers into the Breeding Herd
- Capital Expenditures for Purchased Breeding Cattle

Base Value and Capital Gain (Loss) Calculations for Raised Breeding Stock

- Base Value Calculations for Raised Breeding Stock.
- Capital Gains and Losses on Raised Breeding Stock
- Capital Gains (Loss) for Purchased Breeding Stock

Total Cow-Calf Net Income Base Value and Capital Gains (Loss) Summary Report

- Accrual Adjustments – Base Value & Capital Gains (Loss) for Breeding Stock
- Summary of Calves Weaned and Valuation at Weaning and When Sold.

Measures Descriptions

The key measures of reproduction follow the Standardized Performance Analysis (SPA) measures defined as follows:

1. **Total females exposed at the beginning of the breeding season** is the number of females in the beginning inventory that are exposed either to bulls or in an artificial insemination (AI) program. The number should correspond to the number on the **beginning date** of the breeding season.
2. **Adjusted exposed females including sales, transfers, purchases of pairs and exposed and pregnant females** is an inventory of exposed females that results from the beginning inventory plus all the adjustments. This is the most critical number that must be generated by the inventory in the reproduction and production performance measures of the cow-calf enterprise. The accuracy of this value will determine the overall accuracy of the productivity analysis. The key is to carefully monitor monthly inventory maintenance and consistency between operating cycles. This number begins with the beginning inventory on day one of the breeding season, subtracts culls not intended to be bred, as well as sales or transfers out of the breeding herd and adds purchases or transfers in. The net result is used to determine the weaned calf percentage and other production measures of performance.

3. **A pound weaned per exposed female is** a very important measure of performance for producers selling weaned calves. It is calculated by multiplying weaning percent by average weight. Combining weaning weight and reproduction truly measures production.

The sales data requires separating raised from purchased breeding stock. This is important for calculation of capital gains (loss) for IRS and to measure ranch profit. Death loss data is important for monitoring production performance as well as identifying the loss for IRS reporting for capital loss and correcting the depreciation schedule for purchased breeding stock. Recording the capital expenditures for purchased breeding stock provides data for updating the asset on the balance sheet and depreciation schedule.

Purchased **retained ownership** cattle for resale sales revenue needs to be separate from **raised retained cattle** and the cost of these purchased cattle needs to be recorded for IRS compliance. Having a monthly reconciled cattle inventory by category certainly facilitates reporting requirements,

All the reporting is time consuming but it is very cost effective both in keeping management informed as well as for generating correct IRS reports. Plus, a happy informed CPA is good for business.

Measuring Profitability – Beyond Cash IRS Accounting

Measuring ranch or cow-calf profitability requires accrual adjustments **to match revenue with expenses during the fiscal year**. An accrual ranch expense is the amount of expense that is associated for the fiscal year. Revenue is recorded **when earned and expenses are recorded when incurred**.

This is in contrast to the **cash basis of accounting** where revenue is recorded only when cash is received, and expenses are recorded when cash is paid. When using, cash accounting no attempt is made to match revenue against expenses. However, this cash data is a big part of developing useful accrual adjusted financial statements.

Adjustments to cash data (accrual adjustments) includes recording change in inventories, prepaid expenses, accounts receivable and payable, taxes and interest. Breeding stock, a capital asset, requires calculating capital gains or loss on sales. A procedure is setup for raised replacement that require special treatment as their value is an addition capital asset. End of year recording of accrual adjustment data is an additions task that must be completed in a timely manner to support management needs.

Raised Breeding Stock Accounting

Accounting for raised breeding stock presents challenges that must be addressed to meet cost accounting and management informational needs. Under IRS cash tax reporting raised breeding stock costs are expensed in the year incurred. Raised breeding stock have a zero-tax basis when sold or there is death loss. The net sales value of raised breeding sales is capital gains (loss) for IRS tax purpose. This approach does not allow for fiscal year matching of revenue and expenses nor valuation on breeding stock inventory that are not included on the balance sheet because their IRS cost basis is zero. You can have a raised herd of breeding stock and a zero value for the

herd on the IRS based balance sheet. Pretty worthless information for financial performance evaluation!

For purchased breeding stock the “original” purchase cost is the basis for depreciation. Using a straight-line depreciation with salvage value to account for purchased breeding stock would allow for more accurate and less distorted financial statements than following IRA cash accounting compliance methods.

The Farm Financial Standards Council (FFSC) offers two alternatives to IRS cash tax accounting for raised breeding stock: 1. the base value approach where replacement cost is estimated and 2. The capitalization approach where costs are accumulated or full cost absorption.

Base Value for Raised Breeding Stock

Valuation for raised breeding stock covers the time period from weaning until the heifers are considered bred to enter the breeding cow category. When replacements are held at weaning, they are given a base value that approximates the cost of production. This is recognized in the **income statement matching current year expenses**. An increase in base value income is recognized at the end of the fiscal year to match the base value revenue with production expenses. When replacement moved into the breeding herd as open heifers and then when bred replacement enter the cow herd. The change in base value additions is recognized in four components to match the increasing cost value of the heifer. Spreadsheets are set up to accommodate calculations.

First Fiscal Year

1. At weaning estimated weaned heifer cost of production or **base value**.
2. Weaning to the end of the fiscal year – reclassified as open replacement heifers.

Second Fiscal Year

3. When the open heifers are designated as pregnant – bred heifers.
4. When the bred heifers are moved into the cow herd at the end of the fiscal year.

The gain and loss from the raised breeding stock sales or death loss is calculated by **subtracting the base value from the net sales revenue realizes when the breeding stock is sold or dies**.

Annual raised breeding stock is not depreciated when using base value. The base value of raised breeding stock is shown on the balance sheet as raised breeding stock asset value. The base value can be adjusted over time as replacement cost changes. Notes should be attached to clarify the valuation method.

Purchased breeding stock should be valued at original purchase cost minus accumulated depreciation. Rather than use IRS accelerated methods or section 179 write off a reasonable useful life and salvage value should be used. The CPA can run a “book depreciation” to accomplish this. Or use the capital asset replacement cost decision aid to calculate depreciation (see attached reference list).

Cost Capitalization for Raised Breeding Stock

For the limited number of ranchers using accrual accounting cost capitalization is used, also referred to as the accumulated cost or full cost absorption approach. This requires the rancher to capitalize the accumulated cost of raising the replacement animal. In other words, the entire accumulated cost associated with pre-productive expenditures up until breeding stock are placed into service. For example, the accumulated cost of a weaned heifer in the cow-calf phase would be added to the additional cost of maintaining her until she moves into the breeding cow category.

Once the animal enters the breeding herd, the producer can claim an annual depreciation expense based on the capitalized costs, the estimated useful life and the salvage value of the raised breeding stock. When the capitalization approach is used, raised breeding stock accounting is done using the same methodology described for purchased breeding stock.

All breeding stock are considered depreciable assets and are consistent with the generally accepted accounting principles (GAAP). An annual depreciation expense is assigned to both types of breeding stock. Accumulated depreciation will be kept throughout the assets' economic useful-life and these figures will be used to determine the capital gains (losses) and costs of goods sold when the animal is sold or disposed from the herd. The only revenue recognized would be the gain or loss when the replacement is culled from the breeding operation.

Summary of Key Definitions Used in Measuring Profit

- **Owner Operator Labor and Management Reflected as Family Living Withdrawals** is the cash paid for owner and labor and management services provided by the family. Family living withdrawals should be at a level equivalent to the salary required to hire a non-family member to provide an equivalent service. Actual withdrawals in excess of this amount must be **considered capital distributions** in order to reconcile the retained earnings and statement of cash flows. Family living withdrawals are used not only to calculate cost of production, but return on assets, return on equity, and repayment capital as well.
- **Measuring ranch profitability** requires accrual adjustments **to match revenue with expenses during the fiscal year**. Ranch revenue is recorded **when earned and expenses are recorded when incurred**. This is in contrast to the **cash basis of accounting** where revenue is recorded only when cash is received, and expenses are recorded when cash is paid. When using, cash accounting no attempt is made to match revenue against expenses. However, this cash data is a big part of developing useful accrual adjusted income statements.
- **Net Accrual Adjusted Income** - Revenue earned minus the accrual adjusted expenses incurred during the operating year including the interest expenses are subtracted from cash operating income. Net income is calculated after accounting compensation for owner operator labor and management. For operations that pay salary and wages, this cost is included in operating costs.

- In the financial and economic calculations owner labor and management compensation is subtracted. If family living withdrawals exceed this compensation, it's a capital withdrawal. This is consistent with the way retained earnings are calculated in the total farm/ranch financial statements.
- Financial performance ratios are normally pre-income tax for comparative purpose and to compare alternative investments.
- **Return on Assets (ROA).** This ratio is an indicator of how productive the assets are being used by the enterprise. This percentage is calculated as net income from operations plus interest expense minus family withdrawal representing a payment to owner labor and management divided by average total assets. The reason interest is added back is interest paid represents a return the debt capital. **ROA is a return to capital invested irrespective of capital ownership.**
 - When examining ROA from a market value basis, the value for average total assets is determined by their current market value. The resulting percentage evaluates profitability based on current market value. In other words, this is an indication of profitability if one was to go into the market place and acquire the assets at their current market value.
 - If the market price of the product is below the financial cost of production, it means the producer is using equity to stay in production. If the market price of the product is below the economic cost of production, it means that the resources are producing a return less than their opportunity cost. This means the resources would generate more net income if they were invested in their next best use.
 - ROA indicates the profitability per dollar of assets, thus allowing comparisons over different size firms and different types of businesses or investments
- **Return on Equity (ROE)** - Is the net income after all interest charges. That is, the residual return to the owner's investment divided by the average equity investment. It is a measurement of the return the owners of the business receive on their money invested. ROE can be compared to rates of return in other equity or investment opportunities.

Appendix A: Accounting Chart of Accounts for Cattle Sales

Using the decision aid to develop the accrual adjusted financial statements is greatly facilitated by an accounting system chart of accounts. Sales accounts for commercial breeding cattle categories needs to define for both purchased versus raised cattle for IRS compliance. Examples of accounts are as follows:

IRS Schedule F - Profit or Loss From Farming – Accounts to Record Cattle Sales
1a Sales of Livestock and other resale items

Purchased Cattle Sales – Possible Alternatives

Breeding Cows
Repl. Heifer Bred
Repl. Heifer Open
Cull Cows
Cull Herd Bulls
Feeder Steers - Calves purchased for resale.
Feeder Heifer - Calves purchased for resale.

2 Sales of livestock, produce, grains and other products you raised

Raised Cattle Sales - Possible Alternatives

Cull Cows
Cull Repl. Heifer
Breeding Cows
Repl. Heifer Bred
Repl. Heifer Open
Weaned Steers
Weaned Heifers
Feeder Steers
Feeder Heifer

Using these accounting system subaccounts will generate fiscal year cash data for the **accrual income adjustments** in this decision aid when combined with the non-cash cattle inventory change.

Reference:

Farm Financial Standards Council. “*Financial Guidelines for Agricultural Producers*”, Revised 2021. WWW.ffsc.org.

Sources of Land Grant University Beef Management Decision Aids:

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

Kansas State University – <http://www.ksre.k-state.edu/agriculture/farmmanagement/>

Oklahoma State University <http://www.agecon.okstate.edu/extension/>

University of Nebraska - Lincoln UNL Beef Website <http://beef.unl.edu/>

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