Ranch Accounting and Analysis

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Ranch 101 - Ranch Accounting
Texas & Southwestern Cattle Raisers Association
Ft. Worth, Texas

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The Role of the Accounting System

- Income Tax Preparation
  - Comply with Federal tax laws
  - Minimize income tax
- Management Information
  - Access to transaction, balances, etc.
  - Determine profit (loss) for business
  - Determine profit (loss) for each activity
  - Determine financial health and performance
  - Provide information for strategic decisions
  - In other words, determine the 3 “P’s”

Ranch MA: If you are not going the whole distance, then stay where you are.

- Implementing and completing the MA system.
  - Accounting Skills
- Analysis and Change
  - Analytical Skills
- Interpretation and Communication
  - Communication Skills
Who is involved with the Information System & Who is in Control

- Lender
  - Becomes the “quasi” information manager and user.
  - Motive: Board Members/ Owners & Bank Auditors

- Tax Accountant
  - Motive: Lower the producers tax liability. Probably wants to keep you as a customer. Are they doing the rancher a favor or not?

- Data Entry Person (Daily Grind: Bookkeeper)
  - Usually the spouse or the rancher.
  - Either the system must be simple and user-friendly, or else this person better have some accounting skills.
  - Serves as the “Soul” of the system.
  - Motive: Typically thinks their motivation is to the tax accountant, however should be to the following...

- Information User (Information manager: both financial and production)
  - This is where most ranchers fall down.
  - Don’t know how to generate it and/or don’t know how to interpret and use the information.
  - Motive: Doesn’t exist for most operations.
Start your Ranch MA with the “End Products” in mind

- Ranchers are always told, “you need good financial records” but what is that?
  - Meaningful information, which can impact the management of the business

- We defined the End Product to be:
  - Financial Statements
    - Beginning and Ending Balance Sheet
    - Profit and Loss Statement
  - Financial Analysis as defined by the Sweet 16 ratios as recommended by the FFSC.
  - Profit & Loss by Class
  - Total Unit Cost (TUC)
  - Commodity Cycle Reports
  - Ultimately KPI's defined by the team

Question: How do we get there?

- QuickBooks Pro will partially get you there, however, some accounting knowledge is required and the program’s flexibility can cause problems.
- Need some type of Livestock Inventory system.
- Integration of the two?

Managerial Accounting Using QuickBooks Pro

- Create the system with the end product in mind.
- Create a rigid structure for QB Pro and I don’t give the user many choices.
  - My Ranch Chart of Accounts
  - Your Class List using My Approach.
- Follow the Timeline…
  - Introduction to QuickBooks Pro (Daily Grind)
  - Advanced QuickBooks Pro (The Rest of the Story)
- Incorporate Microsoft Excel or some other spreadsheet.
Accounting & Analysis Relationships

Management vs. Tax Accounting

- **How is “tax” integrity maintained?**
  - MA transactions take place below “Net Ordinary Income”
  - Except for depreciation, mgmt. labor, cost of good sold, gains/losses on sale of assets.
  - Your tax preparer should re-calculate
  - MA transactions accomplished with “classes” and *additional accounts*

- **Major differences**
  - Tax = cash, MA = accrual adjusted
  - Depreciation method
  - Capitalization
  - Handling of “management and labor”

- **However, within the MA system, tax integrity is maintained**
**Management vs. Tax Accounting**

- **Depreciation Differs**
  - Tax = accelerated + sec 179
  - Book = represents allocation of asset's cost over useful life
  - Book depreciation can be easily provided with minimal cost, or…
  - in some operations, you may want to purchase your own “fixed asset” software

**Management vs. Tax Accounting**

- **Capitalization of raised livestock and establishment cost of crops**
  - Only if determinable useful life
  - If indeterminable, must expense in current year
  - BIG PROBLEM with the cow-calf industry
  - Without this, you never really know the financial health of your cow herd.

**Management vs. Tax Accounting**

- **MA includes management (owner) labor as expense (non-deductible)**
  - There is value to the services that you provide your ownership. If there wasn’t you wouldn’t be doing it
  - I encourage you to write yourself a check (withdrawals) and deposit it into a personal account
  - What would it cost you to hire someone to do what you do?
Management vs. Tax Accounting

- Accumulated costs for incomplete classes are transferred to B/S
  - Use journal entry to increase “Investment in …” account (current asset) and decrease expense for that class
  - Recognized as expense in year income occurs (matching principle)

MA System Design

- QuickBooks Pro
  - “This is a $250 program with a $5000 design”
    - Works with Excel to integrate production data
  - Expanded chart of accounts
  - “Step up” accounting
    - Profit, cost and support centers, where the profits centers must pay all expense

Implementing the MA System

- Chart of accounts
- Set up classes
- The daily grind
- Reconcile bank accounts
- Reconcile loans **
- Other resources used (Mgmt Labor)
- Examine P&L by class
- Year end activities
- Create and analyze reports
Implementing the MA System

- Import Ranch Managerial Accounting chart of accounts
  - Add & delete accounts to fit your operation (use caution)
  - Understand the transfer accounts
  - Includes B/S accounts
  - Get to know your COA
  - Print COA for reference

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Every Operation is Made up of Various Pieces. All Can, and Need, to be Managed

My Agricultural Operation

- Profit Centers
- Cost Centers
- Support Centers

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Implementing the MA System

- Set up class list
  - Use sub-classes of PC, CC, SC
    - PC (Profit Center) = those activities (commodities) that sell a product at the end of the production cycle
    - CC (Cost Center) = “factories” that accumulate costs to be transferred and paid by other PCs
    - SC (Support Center) = types of expenses that cannot readily be allocated and will eventually be paid by PCs
Implementing the MA System

- **Support Centers**
  - Interest
  - Machinery & Equipment (M&E)
  - Labor & Management (L&M)
  - General & Administrative (G&A)
- These are always the same
- Can be Considered the “Fixed Costs” of the Operation
  - Is L&M Fixed?

Implementing the MA System

- **Cost Centers**
  - Cow-calf (maybe)
  - ’16 Replacement Heifers
  - ’15 Replacement Heifers
  - Hay Production
  - Grazing
- Here, you begin to customize the system to your operation

Implementing the MA System

- **Profit Centers**
  - ’15 Yearling Heifers
  - ’15 Yearling Steers
  - ’16 Weaned Calves
  - Wildlife
  - Cow-calf (maybe)
- Continue to customize the system to your operation
Implementing the MA System

Time Line

1. “Daily Grind”
2. Check **Unclassified** Column
3. Track Loans- Loan Transaction Histories
4. Update Asset List (Additions & Disposals)
5. Book Accrual Adjustments (Mgmt Labor & Other Resources Used)
6. Is it reasonable?

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Implementing the MA System

Time Line

7. Allocate Support Centers
8. Transfer Cost Centers
9. Capitalize Unfinished Profit Centers
10. Reports
   • Profit & Loss by Class
   • FinAnalysis
   • Total Unit Cost
   • Commodity Reports

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Implementing the MA System

- **The daily grind**
  - Not much more than you should be doing already
  - Assign **account** and **class** to every transaction that affects the Profit & Loss Statement
  - Develop your routine and be **consistent**
Implementing the MA System

- **Reconcile accounts**
  - Bank accounts (checking)
  - Payables
    - Clean up bills to be paid
  - Were note payments handled correctly? (principle vs. interest)

Implementing the MA System

- **Reconcile Loans**
  - Get "Loan Transaction History" from creditor
  - Reconcile each loan advance and each payment with QuickBooks

- **Asset disposals/additions**
  - "Book" asset disposals
  - Was purchase made with check or loan proceeds? Was there a trade involved?

- **Management Labor**
  - Your labor is a resource that was used by the business!

*Seek advice or services of an accounting professional*

Implementing the MA System

(Accounting Short Course)

- When you sell an asset, are the proceeds considered **Income**?
  - Answer: Only the gain/loss on the sale is considered income/expense.

<table>
<thead>
<tr>
<th>Cost of Asset</th>
<th>Proceeds</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Accum. Depreciation</strong></td>
<td><strong>Basis</strong></td>
</tr>
<tr>
<td><strong>Basis</strong></td>
<td><strong>Gain/Loss</strong></td>
</tr>
</tbody>
</table>
Implementing the MA System

- Examine P&L by class monthly
  - Watch for “unclassified” transactions
  - Were transactions classified correctly?
  - Memorize re-occurring transactions

Year End Activities

- Accrual adjustments
  - Prepaid expenses, payables, receivables
  - Management labor
  - Inventory
  - Depreciation (straight-line basis)
- Allocate support centers (Excel worksheets)
- Transfer cost centers (Excel worksheets)
- Send “incomplete” centers to the balance sheet
- Compile reports (Excel worksheets)

REAL LIFE EXAMPLE

Slides taken from a specific ranch and it’s manager’s presentation at the Board of Directors meeting. Salary committee meeting to determine ranch manager’s compensation followed this presentation.
Real Life Example SC G&A Allocation

$562,985

- $202,513 (36%) PC: Cow-calf
- $30,377 (5%) PC: ’13 Yearlings
- $4,050 (1%) PC: Grain Dry
- $20,251 (4%) PC: Grain Irrig
- $2,025 (1/2%) PC: Wildlife
- $182,261 (32%) CC: Hay Production
- $121,508 (22%) CC: ’13 Rep Heifers

After allocations are made, all support centers should have a zero net income.

YEA – Reports

- P&L (Net Ordinary Income) to CPA
- P&L by class and balance sheet
- Fin Analysis
- Total Unit Cost Report
- Commodity Reports

  Note: Bottom 2 reports combine with production data

3,500 Beef Cow Ranch

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>ROA</td>
<td>7.26%</td>
<td>12.63%</td>
<td>11.19%</td>
<td>14.57%</td>
<td>20.02%</td>
<td>7.44%</td>
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<tr>
<td>Net Income from Operations</td>
<td>$724,470</td>
<td>$1,567,148</td>
<td>$1,280,677</td>
<td>$1,687,673</td>
<td>$2,312,529</td>
<td>$842,574</td>
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<tr>
<td>Asset Turnover Ratio</td>
<td>56%</td>
<td>30%</td>
<td>29%</td>
<td>34%</td>
<td>40%</td>
<td>28%</td>
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<td>Operating Expense Ratio</td>
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<td>Depreciation Expense Ratio</td>
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<td>23.3%</td>
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<tr>
<td>Net Income Ratio</td>
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<td>42.5%</td>
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Percentage of Operating Expenses

- Labor
- Rents
- Repairs
- Gas, Fuel, Oil
- Feed
- Pro Fees
- Utilities
- Insurance
- Custom Hire
- Supplies
- Taxes
- Misc
- Vet
- Seed
- Chemicals
- Freight
- Fertilizer

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<tbody>
<tr>
<td>Cow-calf (/ Head)</td>
<td>$678.82</td>
<td>$723.31</td>
<td>$713.32</td>
<td>$787.56</td>
<td>$787.26</td>
<td>$757.24</td>
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<tr>
<td>Cow-calf / (Cwt Weaned)</td>
<td>$98.35</td>
<td>$106.77</td>
<td>$99.11</td>
<td>$109.75</td>
<td>$131.97</td>
<td>$119.37</td>
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<tr>
<td>Hay Production (/ Ton)</td>
<td>$42.98</td>
<td>$70.59</td>
<td>$61.01</td>
<td>$96.41</td>
<td>$79.96</td>
<td>$61.45</td>
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<tr>
<td>Replacement Heifer (/ Head)</td>
<td>$1,028</td>
<td>$1,281</td>
<td>$1,076</td>
<td>$1,128</td>
<td>$1,246</td>
<td>$1,231</td>
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Key Performance Indicators

Based on management and Board of Director input, Key Performance Indicators (KPI’s) have been established.

They include both production and financial measures.

These indicators are used to evaluate performance and establish goals.

KPI: Production

- Pregnancy percentage
- Calving percentage
- Weaning percentage
- Weaning weight per head
- Lbs. weaned per cow exposed
- Total cost per cow
- Unit cost of weaned calf (break even)

KPI: Market Price versus Unit Cost (Break even)

- Unit Cost/Calf per CWT
- Price Received

[Graph showing market price versus unit cost from 2008 to 2016]
KPI: Total Cost per Breeding Cow

<table>
<thead>
<tr>
<th>Year</th>
<th>Cost per Cow</th>
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<tbody>
<tr>
<td>2008</td>
<td>$450</td>
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<tr>
<td>2009</td>
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<tr>
<td>2010</td>
<td>$550</td>
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<tr>
<td>2011</td>
<td>$600</td>
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<tr>
<td>2012</td>
<td>$650</td>
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<tr>
<td>2013</td>
<td>$700</td>
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<tr>
<td>2014</td>
<td>$750</td>
</tr>
<tr>
<td>2015</td>
<td>$800</td>
</tr>
<tr>
<td>2016</td>
<td>$850</td>
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</tbody>
</table>

KPI: Financial

- Working capital
- ROA
- Net Income from Operations (pre interest & income tax)
- Ratios
  - Operating Expense
  - Depreciation Expense
  - Interest Expense
  - Net Income from Operations

Financial KPI: ROA
MA: If you are not going the whole distance, then stay where you are.

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