Using Your Financial Records

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Goals for Today

- Using your records to make decisions

- Enterprise budgets

  - Cost of production

  - Breakeven prices and costs

  - Sensitivity analysis

- Ratios and benchmarks

Records & Making Decisions

- **Records aren't just for filing your income taxes!**

- **Not just for loan applications!**

- **Lots of great information available for managers**

  - Production records coupled with production systems

    - Example - crop yields, nutrient management, seed variety, weather, etc.

  - Financial information of all sorts

    - Profitability, costs, cash flows, net worth, financial efficiency, etc.

    - Breakevens, sensitivity

Records & Making Decisions

- Need consistency from year to year

  - Otherwise, you're wasting your time

- Reduces "faulty memory" or "wishful memory"

  - Example – remembering *only* the best yields and prices you ever had

- Provides ***objective*** information for you and your consultants

- Spreadsheets rock!

  - Copy your information into a spreadsheet and watch the magic happen!!

Enterprise Budgets

- Enterprise = distinct aspect of your farm or business
  - Individual products or "divisions" of your operation
  - You can define each enterprise however you want
    - Example – Enterprises for a cow-calf operation
      - Cows (1st calf, 2nd calf….)
      - Bulls
      - Replacements (raised, purchased, custom-raised, etc.)
      - Calves (steers, heifers, stockers, finished) – up to a given weight or age

Enterprise Budgets

- Look at the revenues and expenses **directly related** to an enterprise
    - **Revenues** = all related sales
        - Sheep Enterprise = lambs, culls, wool
    - **Operating or Variable Expenses**
    - **Overhead or Fixed Expenses**
        - Only include the portion related to that enterprise (pro-rate)
        - Example: Total Depreciation Expense = $50,000/year
            - 40% is for corn production = $20,000/year allocated to corn enterprise
            - Based on total revenues, hours of use, etc.

Examples

- Bee budget (honey & wax products) – a Doc White original

- Soybeans (VCE)

- Cow-calf (VCE)

- **Customize the budgets to your operation!!**

See accompanying spreadsheet

Where Do These Numbers Come From?

- Your income statement, cash flow budget, and production records

- If the records are not available

  - Use local/regional averages

  - Industry publications and research

  - Take your best guess

- For projections into the future – take your best guess

  - Based on past performance (records)

Enterprise Budgets

- **Enterprise accounting makes this SO MUCH EASIER!!**
  - Quicken® & Quickbooks®
    - Use "tags" and/or "classes"
- Use Virginia Cooperative Extension templates (online)
- Build your own spreadsheets (yay!!)
- Allows:
  - Cost of Production estimates
  - Breakeven prices, yields, & costs
  - Sensitivity analysis – "what if input prices are 25% higher…?"

Cost of Production

- Every manager should know their Cost of Production (COP)
  - The cost per-unit to produce a crop or product
  - Which costs do we use?
    - Operating or Variable Costs
      - Feed, seed, fertilizer, hired labor, etc.
    - Overhead or Fixed Costs
      - Depreciation, owner labor, interest forgone, property taxes, insurances
      - Prorate these to each enterprise
        - By total revenues, usage, etc.

Cost of Production

- But, wait, it can't be that simple!
    - What about expense used for several enterprises or the farm in general?
        - Marketing
        - Utilities
        - Repairs
        - Equipment expenses

- Start with your best guess – pro-rate for each enterprise

Cost of Production

- Short-Run COP = Total Operating Costs / Units Sold

  - Soybean Total Operating Costs = $250/acre   (just an example!)

  - Yield = 40 bushels/acre

  - Short-Run COP = $250/acre / 40 bushels/acre = $6.25/bushel

  - **Can you expect to get a price of at least $6.25/bu this year to cover "out of pocket expenses"?**

    - Local market prices

    - Futures market or forward contracts

    - If not – maybe you shouldn't plan to produce that crop this year….

Cost of Production

- Long-Run COP = Total Costs / Units Sold

  - Total Costs = $330/acre

  - Yield = 40 bushels/acre

  - Short-Run COP = $330/acre / 40 bushels/acre = $8.25/bushel

- **If you can't get a market price of at least $8.25/bushel**

  - You can't replace your equipment and fixed assets (depreciation)

  - You aren't paying yourself for your labor & management

  - Maybe you should get out of this enterprise completely

Cost of Production

- For value-based, retail, agritourism, etc.
    - COP helps you determine your pricing strategy
    - With cost mark-up pricing
        - Asking Price = COP x (1 + markup %)
        - **Example: 100% markup for $10/unit COP**
            - Price = $10/unit x (1 + 100%) = $20/unit
                - Remember 100% = 1
    - COP = minimum price you need to get to cover costs

Breakeven Analysis

- Very useful concept
    - That can get ugly fast!
- Let's keep it simple:
    - Breakeven Price = Total Cost / Units Sold

    - **But, wait, that's the same as the COP formula!!**
        - Yes – if you only have *one product* associated with the enterprise

Breakeven Analysis

- What about a cow-calf or dairy or bee enterprise?
  - You sell more than 1 product in the enterprise
  - Cow-calf = calves & culls
  - Dairy = milk, calves & culls
  - Bee = honey, wax, bees, etc.

- Now we need to focus on just one product

Breakeven Analysis

- Bee Enterprise where you sell honey and wax

- Breakeven Honey Price = (Total Costs – "non-honey revenues") / Units sold
  - Example: Total Costs = $16,300/year
    - Non-Honey Revenues = $2,000 of wax products
    - Sell 2,000 lbs of honey/year
    - Breakeven Honey Price = ($16,300 - $2,000) / 2,000 lbs = $7.15/lb
    - Hey, our spreadsheet automatically calculates this!!

Breakeven Analysis

- Bee Enterprise

- Breakeven Honey Yield = (Total Costs – "non-honey revenues") / Price/unit

    - Example: Total Costs = $16,300/year

        - Non-Honey Revenues = $2,000 of wax products

        - Price will be $10.00/lb

        - Breakeven Honey Price = ($16,300 - $2,000) / $10.00/lb = 1,430 lbs/year sold

        - Hey, our spreadsheet automatically calculates this, too!!

Math, Math, Math…. Isn't There an Easier Way?

- Trial & error on the spreadsheet

  - Change the price until Return (Profit, EBT) = $0

- Tune in for the spreadsheet session to learn "Goal Seek"

Sensitivity Analysis

- Big phrase for "let's change some key numbers & see what happens"

- Focus on the **key factors** of production

  - Selling price

  - Yield or quantity sold

  - Main input costs ($/unit)

- Change **one factor at a time** and look at the change

  - What if fuel prices go to $6.00/gallon, or increase by 25%....

Bee Budget

- What if I can only sell honey for $8.00/lb in my area?
  - Simply change the selling price from $10 to $8
  - Earnings Before Taxes drops from $5,700 to $1,700   Yikes!!
- Reset the price to $10
- What if glass jars increase from $3.00 to $5.00 due to distribution channel?
  - Change COGS from $3.00 to $5.00/unit
  - Earnings Before Taxes drops from $5,700 to (**$300)   Oh, boy!!**

Ratios & Benchmarks

- You're probably using your production records to do this now
  - Average Daily Gain (ADG)
  - Pounds of Feed / Pound of Gain
  - Yield / Acre

  - Compare to appropriate benchmarks for your operation
  - Take management action as needed
    - "My ADG is lower than the benchmark – Why?
      - Weather, nutrition, disease, stress, etc.

Financial Ratios & Benchmarks

- Same process
  - Calculate the ratio or measure
  - Compare it to benchmarks
    - Talk with your lender to get appropriate benchmarks
  - Take management action to improve
    - And improve your profits, liquidity, financial efficiency, solvency and/or repayment ability
    - And become a safer borrower for the lender
      - Lower interest rates or fees? Higher borrowing capacity?
    - And become a safer customer for your insurance agent
      - Lower premiums?

Enter Doc White's Handy-Dandy Financial Ratio Spreadsheet

- You'll need 2 years of financial statements

  - Balance sheets

  - Income statements (accrual-adjusted if possible)

  - Family living expenses and on-farm income   (cash flow budget)

  - Total P&I payments on all loans (cash flow budget)

- Enter the summary information into the **blue cells**

- **And magic happens!!**

Financial Ratios & Benchmarks

- Your ratios are automatically calculated
  - You turned big numbers into meaningful management information!!
- Your ratios are compared to standard benchmarks
  - You can tailor the benchmarks to your operation
  - Green light = you're kicking butt!
  - Yellow light = no serious problems, but look into it when you get a chance
  - Red light = Needs your immediate attention
- Have a deeper conversation with your lender!

Is That All?

- Start to develop a "dashboard" of other key indicators for your operation
  - Pull numbers from your records to calculate them

- Example:
  - Dairy:
    - Feed Cost / Cow per day
    - Income Over Feed Cost
    - Investment / Cow & Debt / Cow

Make Your Records "Earn Their Keep"

- Records – not just for taxes!!

- Determine the information you need for your operation

- Build your record system to collect the necessary data

- Transform that data into management information

  - Cost of Production

  - Breakevens & Sensitivity

  - Ratios & benchmarks