



***Wisconsin Ag Women's
Summit
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Financial Statements – WHY?

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WHY?

I have calves to feed, checks to write, feed to grind, a mower to fix, and my kid's ballgame to attend! Why should I spend time keeping good records and more time analyzing them!

Questions

- How much income did I make last year on my farm?
- To what do I attribute my income, i.e., where did it come from (better prices, lower production costs, increased production)?
- What is my business worth?
- Is my wealth growing?
- How is my wealth growing comparatively?

Questions

- I would like to expand my beef enterprise, what will I need to get debt financing?
- Perhaps I would like to, but should I expand my beef enterprise?
- Taxes are due next month – oh _____!!!!
- What do I need to get a loan from the bank?

Questions

- Can I meet cash needs when bills come due?
- If not, when will I be short and by how much?
- Do I need to prepare for periods of excess cash?

WHY?

1. Because it makes a difference on your bottom-line
2. It is what lenders require to do business
3. It is what lenders/others need to help and assist your management efforts
4. Because you need to know where to spend your valuable management time to improve profitability

Financial Analysis – WHY?

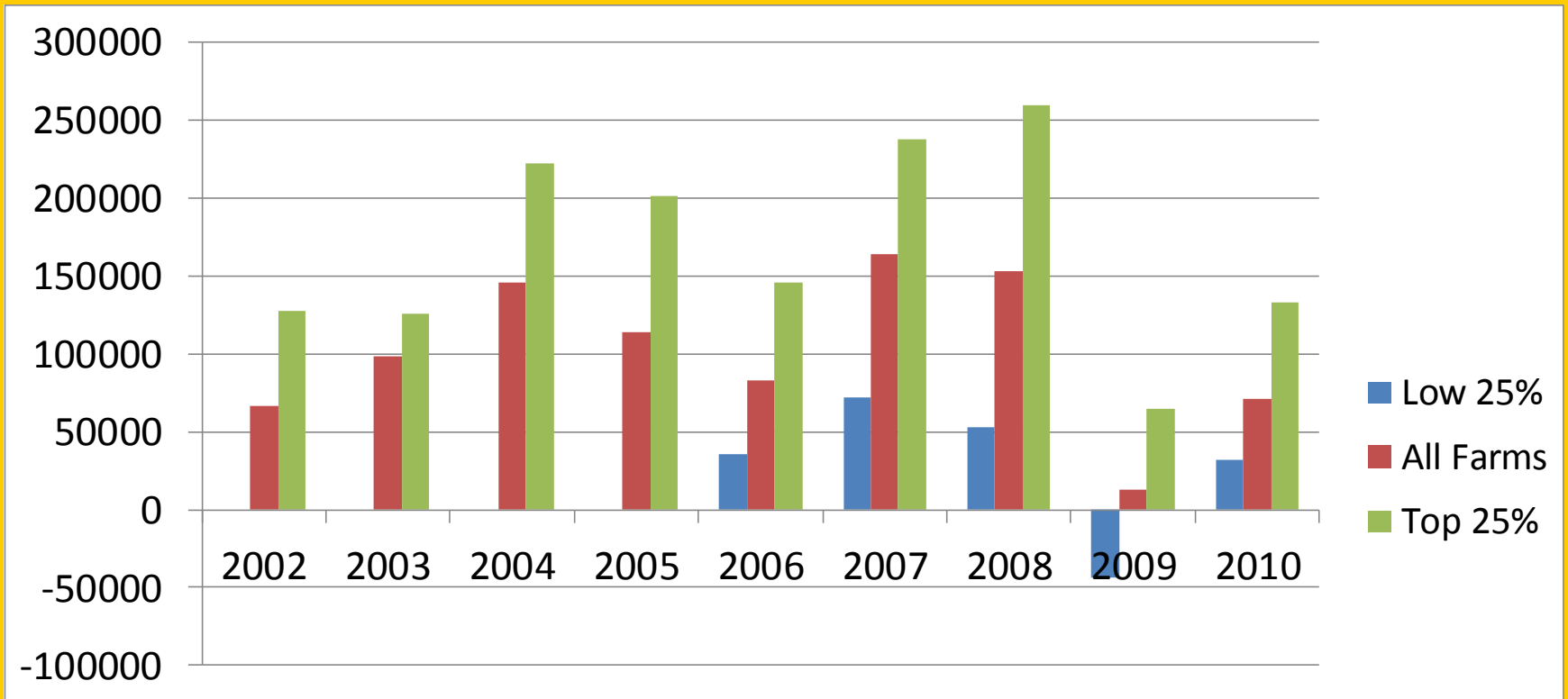
Because Management Makes a Difference on the Bottom-Line

| Corn | Net Return per Acre, 2011 | | |
|-------------|----------------------------------|---------|----------|
| | Low 20% | 40%-60% | High 20% |
| Acres | | | |
| 51-100 | 21.76 | 278.10 | 532.15 |
| 101-500 | 44.22 | 270.90 | 513.91 |
| 501-1,000 | 70.57 | 265.71 | 481.93 |
| 1,501-2,000 | 117.89 | 224.94 | 464.75 |

Source: Center for Farm Financial Management, UOM

Net Farm Income (w. Econ Depr)

CDP: 100-250 cows, freestalls, no organic, no pasture



Source: Center for Dairy Profitability AgFA Database

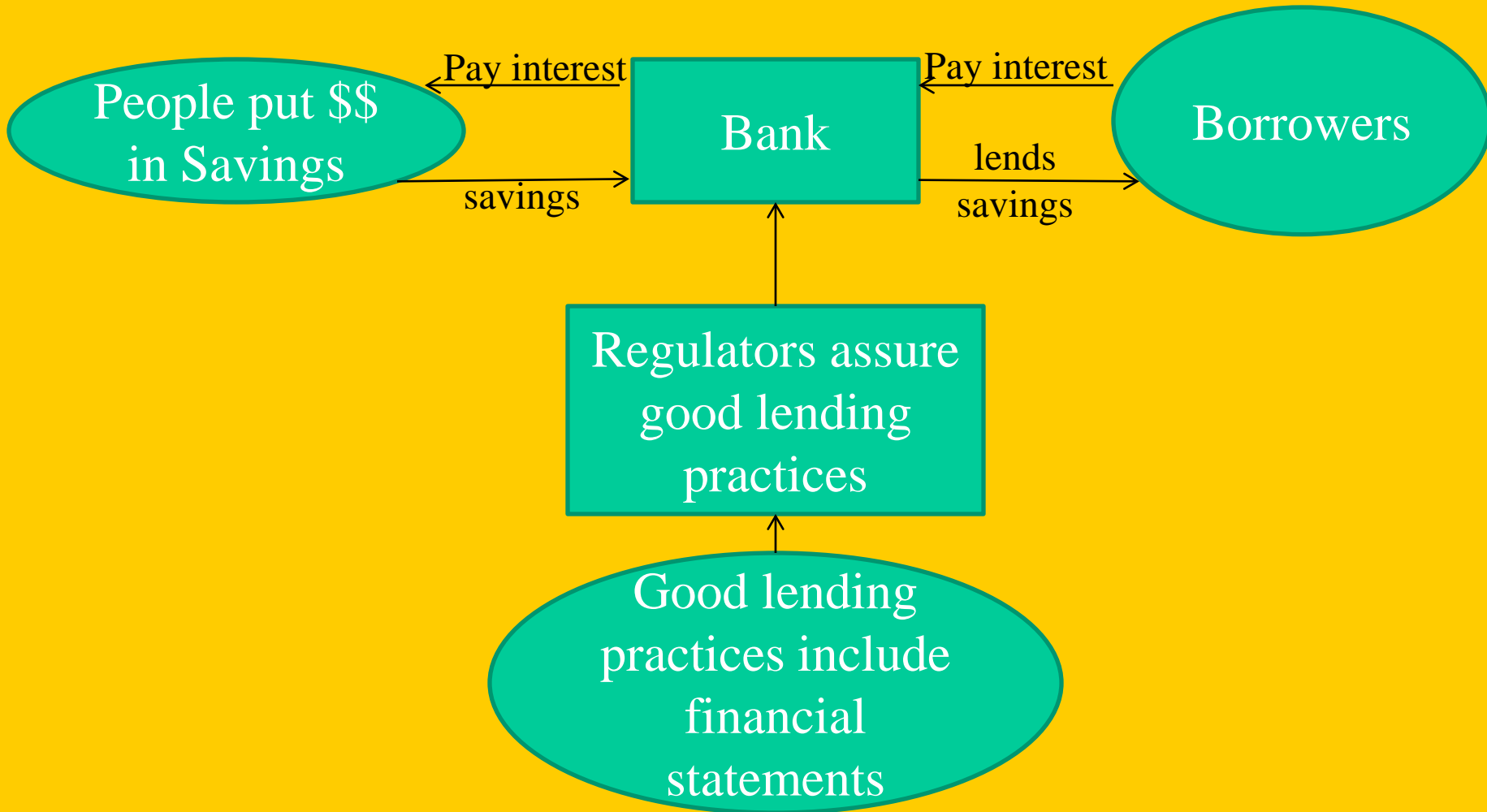
Financial Analysis – WHY?

*Because Management Makes a Difference
on the Bottom-Line*

| Dairy | Net Return per Cow, 2011 | | | |
|--------------|---------------------------------|---------|---------|----------|
| | Cows | Low 20% | 40%-60% | High 20% |
| 51-100 | | -418.17 | 438.78 | 1,305.49 |
| 101-200 | | -176.66 | 456.12 | 1,062.02 |
| 201-500 | | -211.54 | 536.60 | 1,128.13 |
| > 500 | | 217.95 | 603.54 | 1,425.17 |

Source: Center for Farm Financial Management, UOM

2. It is What Lenders Require to Do Business



3. It is What the Lender/Others Need To Help You Be a Better Manager

- Well done financial statements will allow the lender/others help you:
 - Structure your debt repayment
 - Plan your cash flow
 - Plan for future expansion or contraction
 - Plan for profitability
 - Plan for risk

4. Because it lets you know where to spend your valuable management time

Burkey Farms

- Began in-depth financial analysis in 2003
 - Switched from raising breeding stock to buying
 - Switched from 3-stage farrow-finish to 2 stage
 - Saved \$2/cwt
 - Changed their sort practices.
 - In total, added \$50,000 net income

Got the Why

How About the What

*Production
Activities*

*Investment
Activities*

*Financing
Activities*

*Analysis
Activities*

*Accounting and
Record-Keeping
System That Can
Tell You:*

*Where You Are
and How You
Got There*

*Where You Are
Planning on
Going*

Our Focus Today

*Balance
Sheet*

*Income
Statement*

*Cash Flow
Budget*

*Pro Forma
Income and
Balance St.*

*Statement of
Owner Equity*

*Statement of
Cash Flow*

*Enterprise
Budget*

*Partial
Budget*

Better Farm Management Via Financial Records and Analysis

Appropriately and Accurately:

Pre
Management
Getting
Prepared

1. Obtain records
2. Catalog those records into standard financial forms
3. Crunch and Compare the numbers
 - To the firm's own past history (trends)
 - To a standard for the industry
 - To other like businesses

Management
Making and
Implementing
Decisions

4. Run Diagnostics, that is, evaluate the financial story being told by the numbers.
5. Manage, that is, plan and implement informed management decisions.

Let's Kick the *Balance Sheet*
Tires!

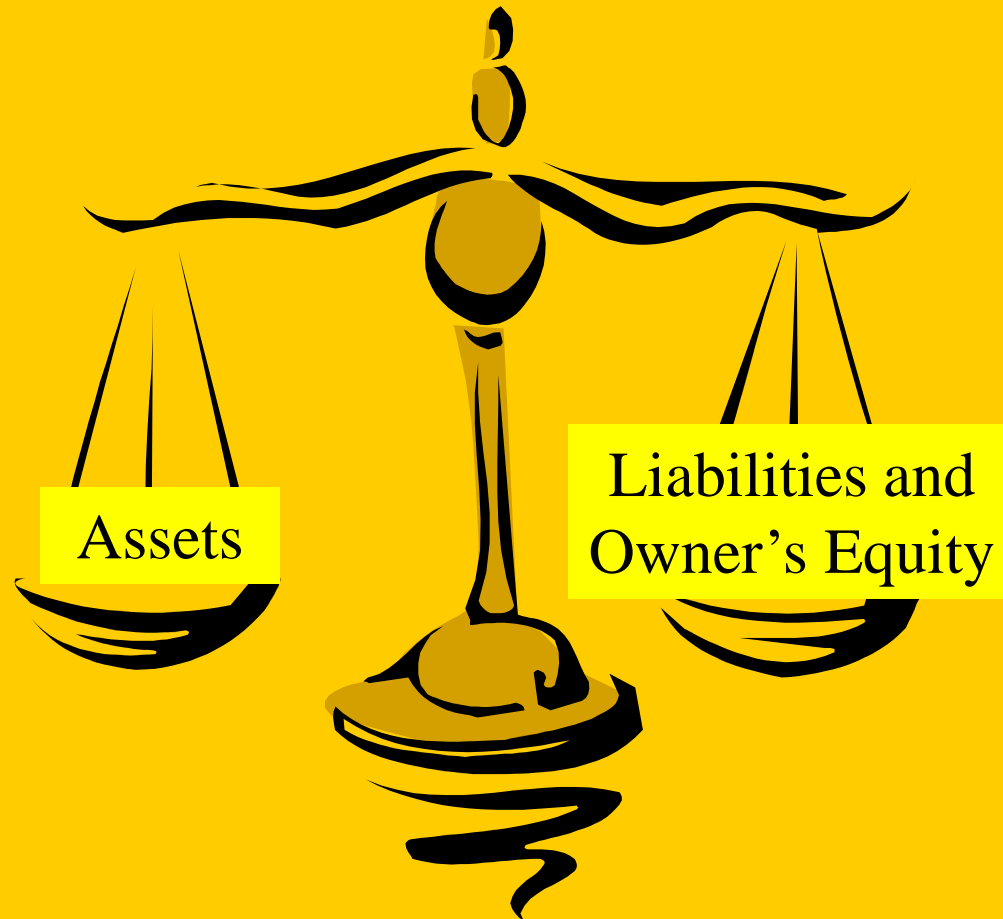


The Balance Sheet

- Is a reflection of the value of your business TODAY, a point in time appraisal of value:
 - everything you own (Assets),
 - everything you owe (Liabilities),
 - and the difference between the two (Owner Equity or Networth).

The word “balance” comes from the need to balance assets against liabilities and owner equity,

$$\text{Assets} = \text{Liabilities} + \text{Owner Equity}$$





Balance Sheet

- The balance sheet reflects that there are two groups that lay claim to every penny of assets in the business
 - Creditors (first in line)
 - Owners (you)

$$\text{Assets} = \text{Liabilities} + \text{Owner Equity}$$

Those assets
claimed by
creditors

Those assets
claimed by you

Balance Sheet General Format

| <i>Assets</i> | | | <i>Liabilities</i> | | |
|--|------|------|------------------------------------|------|------|
| | Cost | Mrkt | | Cost | Mrkt |
| Current Assets | \$ | \$ | Current Liabilities | \$ | \$ |
| Non Current Assets | \$ | \$ | Long-Term Liabilities | \$ | \$ |
| TOTAL ASSETS | \$ | \$ | TOTAL LIABILITIES | \$ | \$ |
| | | | NETWORTH (OWNER EQUITY) | \$ | \$ |
| TOTAL ASSETS = TOTAL LIABILITIES + ONWER EQUITY | | | | | |



Balance Sheet General Format

| <i>Assets</i> | | | <i>Liabilities</i> | | |
|----------------------------|------|------|------------------------------------|------|------|
| | Cost | Mrkt | | Cost | Mrkt |
| Current Assets | \$ | \$ | Current Liabilities | \$ | \$ |
| Intermediate Assets | \$ | \$ | Intermediate Liabilities | \$ | \$ |
| Fixed Assets | \$ | \$ | Long-Term Liabilities | \$ | \$ |
| TOTAL ASSETS | \$ | \$ | TOTAL LIABILITIES | \$ | \$ |
| | | | NETWORTH (OWNER EQUITY) | \$ | \$ |

TOTAL ASSETS = TOTAL LIABILITIES + ONWER EQUITY

Balance Sheet

- Two kinds of balance statement numbers – cost basis and market basis
 1. Cost basis
 - Assets valued at their original cost less accumulated depreciation
 - A true picture of operational business performance

Balance Sheet

2. Market basis

- Assets at market value.
- A “true” reflection of the value of the business today if you sold it
- Not a “true” value of operational performance

Why a Balance Sheet??

1. Let's you know what your business is worth financially.
 - If I sell out today and pay all my debts, what's left over?
2. Is it growing?
3. Where is my owner equity coming from?
 - Profitable operations, land appreciation, etc.

Why a Balance Sheet??

4. Allows a lender to assess if there is enough collateral to cover a loan
5. Allows you to assess
 - Liquidity
 - ability to meet short-term (1 year) financial obligations under normal operating conditions.
 - Solvency
 - ability to cover all short and long-run obligations with the assets of the business

Why a Balance Sheet??

6. Allows you to assess the value of your assets in terms of their use in generating profits.
 - A return to your investment

Anatomy of Returns

Total Assets = Total Liabilities + Total Equity

Total amount of stuff used in the business to make profits (supplies, inputs breeding stock, machinery, etc.)

How much of that stuff is financed by the “bank” (debt capital)

How much of that stuff is financed by your money (equity capital)

So, when you make profits, those profits are a return to all the assets, some of which is a return to your money invested (equity capital) and some of which is a return to the bank’s money (debt capital).

Anatomy of Returns – Case 2

- \$1,000 of Total Assets
- \$700 my money, \$300 borrowed at 8%
- generated \$500 of total revenue,
- \$400 of expenses before interest
- \$100 profit before interest
- \$76 profits after \$24 interest expenses.

I leveraged someone else's money to increase the return to my money.

My money
(Equity Capital)

\$700

Total Assets

\$1000

Bank's money
(Debt capital)

\$300

$$\frac{76}{700}$$

=

ROROE = 10.9%
\$10.9 cents of income per dollar of your money

$$\frac{100}{1000}$$

=

Before interest \$.10 cents of income per dollar of all assets used.

ROROA = 10%

ROROA > i-rate The extra is payment to equity
10% 8%

Have We Kicked the *Balance*
Sheet Tires Enough!



Let's Kick the
Income Statement Tires!



Why the Income Statement

1. Because net farm income is the single most important measure of performance
 - Did I make or lose money
 - How much did I make or lose
 - How much did I pay to get the money I made (efficiency)
 - Where did all the money go
 - Labor
 - Management
 - Bank
 - Profits, etc.

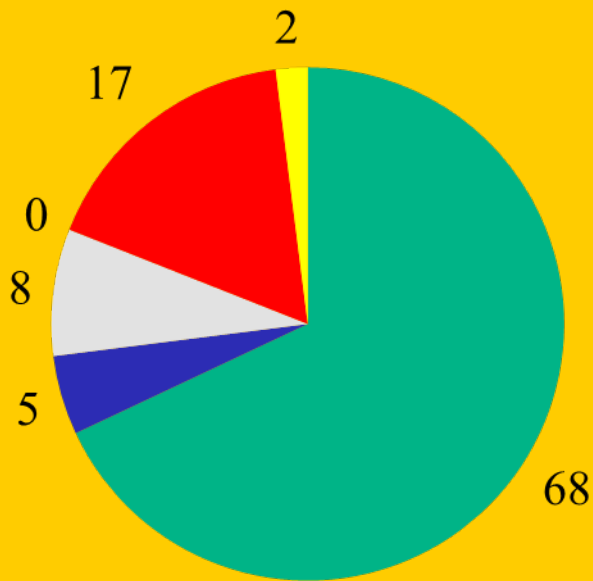
Where did all the money go

| | Farm 1 | Farm 2 |
|--------------------|---------------|---------------|
| Herd size | 58 | 59 |
| Production per cow | 22,453 | 22,633 |
| Total Revenue | 225,724 | 225,362 |
| | | |

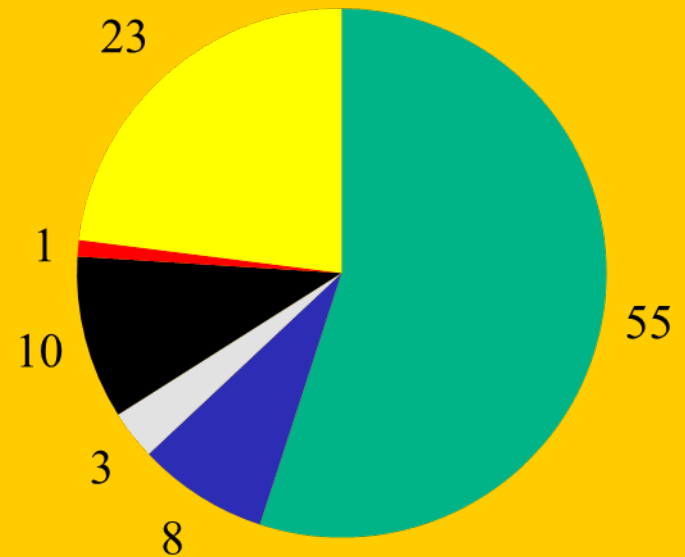


Where did all the money go

Farm 1 (ROROA=-.5%)
Per Dollar Gross Revenue



Farm 2 (ROROA=9.2%)
Per Dollar Gross Revenue



- Operating
- Depreciation
- Interest
- Wages
- Rents & Leases
- Profits



Income Statement

- Three main parts
 1. How much money came in (revenues, receipts)
 2. How much money went out (expenses)
 3. What's the difference (profits)

Income Statement

- Two ways to categorize revenues, expenses, and profits:



When cash exchanges hands



When income/expenses are “realized”



Cash Income Statement

- When cash exchanges hands
 - Corn that has been combined and put in the bin does not get counted as revenue until it is sold and cash exchanges hands.
 - That may be this year or next year
 - Exception to the cash rule: Depreciation



Accrual Income Statement

- When income/expenses are “realized”
 - Corn that has been harvested and put in the bin is a “realized” revenue and its value is part of the Accrual income statement this year
 - Even if it is actually sold next year

Accrual vs Cash

- Cash is easier
- Cash allows for income tax management
- Cash is what most Agricultural producers do
- IRS allows it

- Accrual is what most Agricultural producers should do.
- Accrual provides “true” profitability.
- Don’t use cash to analyze the business’s profitability
- If you want to conduct serious and meaningful financial analysis, Accrual is the way to go.

Study, University of Illinois

- An evaluation of Cash versus Accrual statements for the same farms showed an 85% difference in measured income.
- So:
 - Use Cash for tax management
 - Use Accrual for “True” assessment of profitability

Accrual Income Statement - How

- Start with cash and adjust for income/expenses “realized” this accounting period

Cash $+(-)$ (ending value – beginning value)



Cash to Accrual Example

- Remember: $\text{Cash } +(-) \text{ (ending value} - \text{beginning value)}$
 - Beginning value of grain in a bin on Jan 1, 2011 is \$5,000
 - Harvested and put \$3,000 of grain in the bin during 2011
 - Sold \$1,000 worth during 2011
 - Ending value on December 31, 2011 is \$7,000

Cash income = 1,000

Accrual income = 3,000

$1,000 + (7,000 - 5,000)$

Cash or Accrual?

Accrual Adjusted

| Cash Basis | Adjustments | Accrual Basis |
|---------------|---|----------------------|
| Cash revenue | <u>Changes in inventory (livestock, crops)</u> + (ending – beginning inventory) | = Gross Revenue |
| | <u>Changes in accounts receivable</u> + (ending – beginning accounts rec.) | |
| Cash expenses | <u>Changes in prepaid expenses</u> - (ending – beginning prepaid exp.) | = Operating Expenses |
| | <u>Changes in supplies and growing crops</u> - (ending – beginning supplies) | |
| | <u>Change in payables/accruals (accounts, taxes, int.)</u> + (ending – beginning payables) | |
| Depreciation | No adjustment | Depreciation |

Income Statement General Format

| | |
|--|-------------|
| REVENUES: | \$\$ |
| Crop, livestock, and other Ag product sales | |
| Other revenues (govt. pmts., custom work, accrual adjustments, etc.) | |
| - Less feed costs and feeder livestock (aka: Cost of Goods Sold) | |
| <i>Value of Farm Production (aka: Gross Margin)</i> | |
| EXPENSES: | |
| Expenses (seed, feed, fuel, vet, labor, accrual adjustments, etc.) | |
| Depreciation | |
| <i>Total Operating Expenses</i> | |
| Interest expenses | |
| <i>Net Farm Income From Operations</i> | |
| Plus/Minus gain or loss from sale of capital assets | |
| <i>Net Farm Income</i> | |
| Plus/Minus gain or loss from non farm business sources | |
| <i>Net Income</i> | |

Link Between Balance Sheet and Income Statement

- Net Farm Income from the Income Statement becomes an addition to owner equity in the Balance Sheet.

WI Dairy Farm Y

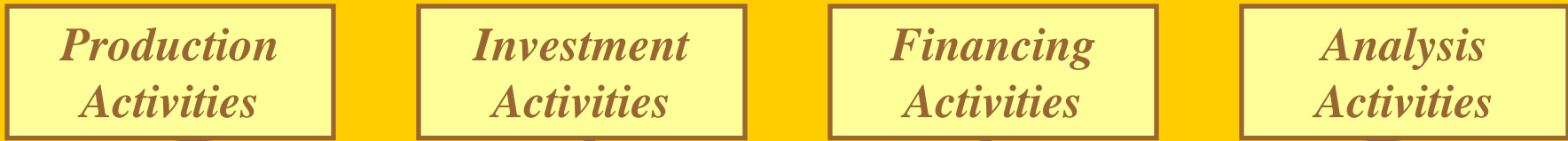
- Average Rate of Return on Equity on all WI Dairy Farms of 100-150 herd size in 2005 was 9.0%.
- Rate of Return on Equity for Farm Y was 5.9%
- Production was higher than average, so why is ROROE so low?
 - Farm records analysis shows that they are paying more input costs per unit of production. Repairs, labor, breeding fees and other costs are higher than the average.

Have we kicked the *Income*
Statement Tires Enough!



Let's Kick the *Cash Flow*
Budget Tires!



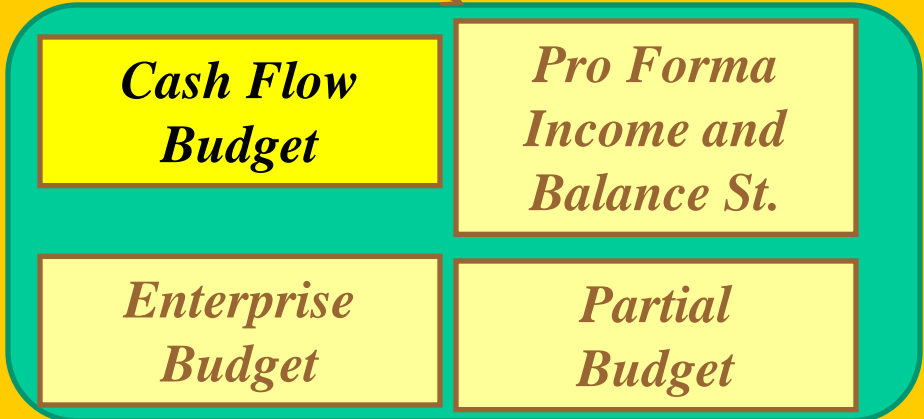
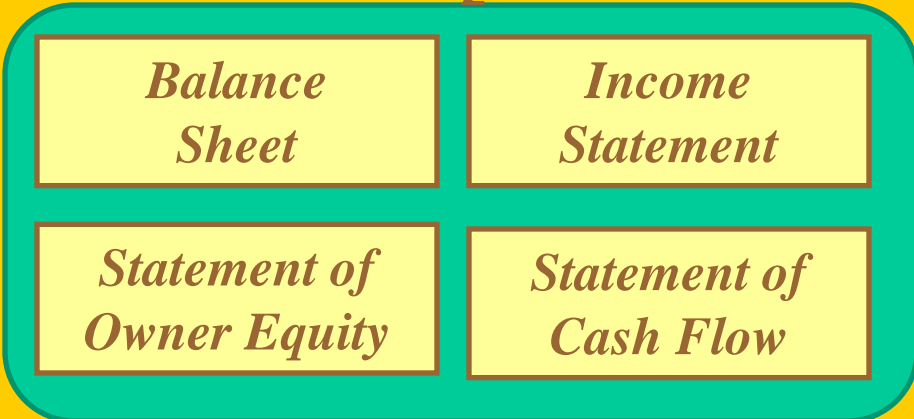


Accounting and Record-Keeping System That Can Tell You:

Where You Are and How You Got There



Where You Are Planning on Going



Cash Flow Budget - WHY?

- Forces the planning function of management
- Answers the question, “Can I pay my bills and when?”
- Assess when you need cash and how much
- Assess when you have excess cash and how much
- Assess loan needs & repayment
- Allows you to PLAN sales at the most opportune times (rather than being forced to sell)
- Communication document

Cash Flow Budget Format

| | Period 1 | Period 2 | Period 3 | Period 4 |
|--------------------------------|----------|----------|----------|----------|
| <u>Cash Inflows</u> | | | | |
| + From Operations | | | | |
| + Capital Asset Sales | | | | |
| + Non-farm sources | | | | |
| <u>Cash Outflows</u> | | | | |
| - From Operations | | | | |
| - Capital Asset Purchases | | | | |
| - Non-farm outlays | | | | |
| - Debt repayment | | | | |
| = Initial Cash Position | | | | |
| + New Borrowing | | | | |
| = Final Cash Position | | | | |

Keyword is Cash

- If cash exchanges hands it goes on the cash flow budget
 - Includes:
 - Principal payments
 - Capital asset purchases
 - New loan proceeds
 - Does Not Include:
 - Depreciation
 - Inventory or other accrual adjustment changes
 - Opportunity costs
 - Unpaid labor and management

Cash Flow Is Not

- Income Statement
- Enterprise Budget

- To use as a proxy for either could lead to poor management decisions.

Rules 1 & 2

- 1. If cash has not exchanged hands then it does not belong on the cash flow statement**
- 2. If cash has exchanged hands then it belongs on the cash flow statement!**

Process – Getting Started

1. Determine the boundaries of the business
 - Are all farm enterprises to be included
 - What non-farm inflows and outflows are to be included
2. Outline and plan your production
 - Acres of crop, head of livestock, production
 - Inputs (quantity, price)
 - Feed requirements

Process: Operating Receipts (Cash Inflows)

3. Kind, timing, and dollar amount of sales

- Livestock sales: all market and breeding stock that results in cash inflow
 - Do not include value of animals held for breeding
- Crop sales: this and past year's crops
 - Do not include value of stored grains or grains used for feeding during the year
- Product sales: milk, wool, eggs, etc.
- Must estimate selling price and quantity sold (error towards conservative)

Process: Non-Operating Receipts (Cash Inflows)

4. Kind, timing, and dollar amount of cash inflows from sources other than direct operations
 - Custom work
 - Farm programs
 - Rents
 - Investments, patronage dividends
 - Non-farm incomes (investments, contributed capital, off-farm job)

Process: Operating Costs (Cash Outflows)

5. Estimate operating costs (total need less inventory on hand)

– quantity, price, total dollars, and timing for

- feed
- Seed
- Chemical
- Vet
- Repairs
- Utilities
- fertilizer
- labor
- rent
- custom work hired
- insurance
- etc.

Process: Non-Operating Costs (Cash Outflows)

6. Kind, timing, and dollar amount of cash outflows from sources other than direct physical operations
 - Scheduled principal payments
 - Scheduled interest payments
 - Taxes, legal, and accounting
 - Insurance, Repairs, Management salaries
 - Subscriptions, memberships
 - Non-farm expenses

Process: Family Living (Cash Outflow)

7. Kind, timing, and dollar amount of cash outflows due to withdrawal for Family Living

Process: Capital Sales & Purchases

8. Kind, timing, and dollar amount of:
 - Cash inflows from the sale of capital assets
 - Cash outflows from the purchase of capital assets
 - Machinery,
 - Buildings,
 - Breeding livestock
 - Land

Process: Initial Cash Position

9. Calculate Initial Cash Position

$$\begin{array}{r} \text{Total Cash Inflows} \\ - \text{Total Cash Outflows} \\ \hline = \text{Initial Cash Position} \end{array}$$

Process: Determine Your Cash Plan

10. Cover cash shortages

- New borrowing and/or contributed capital
 - Operating line of credit

11. Invest your surpluses

Process: Review & Revise

12. Does it smell right?

- Conservative estimate
- Too conservative?

13. Play and Plan

- Plan your cash management to take advantage of more opportune sales and purchases

Process: Communicate and Monitor

14. Communicate

- Lender (line of credit)
- Business partners
- employees



15. Monitor

- Track actual cash flows
- Compare to the cash flow budget
- Change accordingly

Have We Kicked the *Cash Flow*
Tires Enough!



Better Farm Management Via Financial Record and Analysis

Appropriately and Accurately:

Pre
Management
Getting
Prepared

1. Obtain records
2. Catalog those records into standard financial forms
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4. Run Diagnostics, that is, evaluate the financial story being told by the numbers.
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Financial Diagnostics

- Ratios
 - FFSC Sweet 16 (now 21)
- DuPont System

How well I turn
Gross Revenues
into Net Revenues

How well I turn
Assets into Gross
Revenues

X

=

Return On
Assets

If Return on Assets is low it is due either to assets not being converted into gross revenues or gross revenues not being turned into net revenues

Frey Farms

- Began in-depth financial analysis in 2002
 - Sold cattle enterprise not because it was not profitable, but because 20% of his time was involved in generating only 1% of family income.
 - Sold semis in lieu of hiring their trucking
 - Built new grain storage facilities
 - Switched to earlier maturing SB thus allowing less machinery.

WI Dairy Farm X

- Average Rate of Return on Equity on all WI Dairy Farms of 100-150 herd size in 2005 was 9.0%.
- Rate of Return on Equity for Farm X was 20.5% !!!
- Why?
 - They were incredibly efficient with their assets
- How
 - They purchase, rather than grow their own feed (no combine, smaller tractors, no tillage equipment, no timeliness problems.)
 - Farm Records and Analysis showed them that they were great at milking cows, but lousy managers in crop production!

WI Dairy Farm Z

- Average Rate of Return on Equity on all WI Dairy Farms of 100-150 herd size in 2005 was 9.0%.
- Rate of Return on Equity for Farm Z was 24.6%
- Production was lower than average, so Why is ROROE so high?
 - Farm records analysis shows that they are extremely efficient. This farm is a pasture system whose basic costs per cow are 35% less than the average 100-150 cow farm
 - They don't produce as much milk, but they don't pay much for it either!

Will You Be Able to Use Farm Records and Analysis to Increase Your Profits Next Year?

- Maybe, but probably more long-term:
 - It takes time to learn financial analysis
 - It takes employment of systems/software to allow good analysis

Other Statements

- Statement of Cash Flows
 - Shows where cash came from during the previous year and where it went to
- Statement of Owner Equity
 - Shows from where your business wealth has come from
- Enterprise Budget
 - Planning budget for determining the potential profitability of individual enterprises
- Partial Budget
 - Evaluation tool for determining the financial outcome of a specific change in the business