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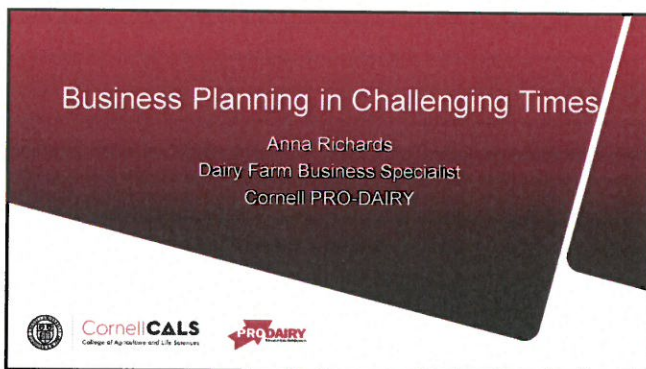
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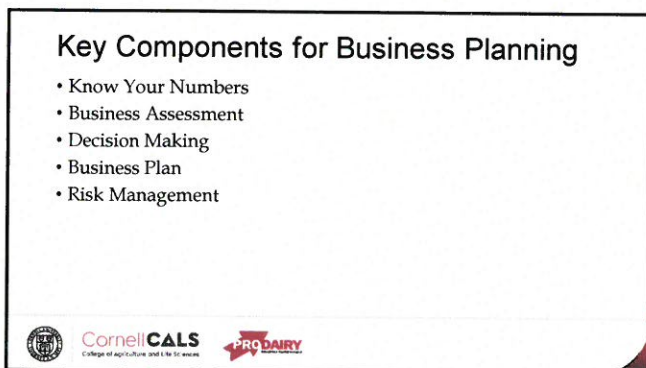
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## Know Your Numbers: Records for Management



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## Don't...

- 3. Neglect needed accounting tasks because there isn't time right now.

Knoblauch, W. Do's and Don'ts for Dairy Farmers When Facing Financial Difficulty. March 10, 2018.



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## What numbers are you managing from?

- Check book balance
- Accrual adjustments
- Consolidated financial statements
- Monthly or quarterly trends
- Multi-year trends



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## Reasons for Record Keeping

- For income tax purposes
- Because they are required by the lender
- To keep other family members happy
- To determine farm profits
- To help in decision making
- To measure whether goals have been reached



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## Quality Records

- Timely
- Accurate
- Complete
- Available



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## Key Financial Statements

- Profit/Loss
  - Cash vs. Accrual
  - Gross Operating Revenue
  - Gross Operating Expenses
- Balance Sheet
  - Book vs. Fair Market Value
  - Total Assets
  - Total Liabilities
  - Short/Int/Long Term Assets & Liabilities



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## Business Assessment



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## Do...

- 1. Complete a production and financial management analysis of your business for 2017. Determine strengths, but most importantly, areas for improvement with an immediate response and improvement in cash flow.

Knoblauch, W. Do's and Don'ts for Dairy Farmers When Facing Financial Difficulty. March 10, 2018.



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## Business Assessment- SWOT Analysis

- What are we doing well?
- Where are we leaving money on the table?
- Where are our opportunities?
- What could disrupt our business?



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## Business Assessment

- Calculating Financial Ratios
  - Profitability
  - Liquidity
  - Solvency
  - Repayment Capacity
  - Financial Efficiency
- Benchmarking



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## Profitability Equation

$$\text{Profitability} = \frac{\text{Volume} \times (\text{Price} - \text{Cost})}{\text{Investment}}$$

Where are the opportunities to improve the business?

Volume  
Price  
Cost  
Investment



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## Business Assessment

- Profitability
  - Maintain ability to meet family goals
  - To build retirement for senior/current generation
  - To reinvest in the business
- Are there earnings being left on the table?



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### Profitability Analysis

- Rate of Return on Assets
- $(\text{Net farm income} + \text{interest} - \text{value of operator}) / \text{average farm assets}$
- What interest rate is being generated for all the money invested?

WEAK	STABLE	STRONG
< 4%	4% - 9%	> 9%



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### Profitability Analysis

- Rate of Return on Equity
- $(\text{Net farm income} - \text{value of operator}) / \text{average farm net worth}$
- What interest rate is being earned on your money?

WEAK	STABLE	STRONG
< 5%	5% - 10%	> 10%



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### Business Assessment

- Liquidity
  - What is the ability of the business to service debt in the short term - next 12 months?
  - Ability to handle shock to operating efficiency?
  - How are we positioned to handle a low milk price cycle?



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## Liquidity Analysis

- Working Capital to Operating Gross Expenses
  - Working Capital = Total current assets - total current liabilities
  - Working capital / total expenses
  - What % of the farm expenses are available as excess operating capital?

WEAK	STABLE	STRONG
< 18%	18 - 28%	> 28%



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## Business Assessment

- Solvency
  - If the business was sold, can all debt be covered?
  - How much of the business is owned by the lender?
  - For every dollar of equity, how much debt is utilized?
  - Can we borrow more capital if needed?
  - If an opportunity comes up, can we pursue?



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## Solvency Analysis

- Equity to Asset Ratio
  - Total farm net worth / total farm assets
  - What part of the business do you own?
  - % equity

WEAK	STABLE	STRONG
< .45	.45 - .75	> .75



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## Business Assessment

- Financial Efficiency
  - How well are assets generating revenue?
  - Where is that revenue going?
    - Operating expenses
    - Interest
    - Depreciation
    - Profit
  - Where is the opportunity to improve earnings?
  - What can be done to improve investment efficiency?
  - What can be done to improve operating efficiency?



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## Financial Efficiency Analysis

- Asset Turnover Ratio
  - Gross farm revenue / average farm assets
  - How much sales did you generate per dollar invested?

ASSET TURNOVER	ASSET TURNOVER	REVENUE
< .50	.50 - .60	> .60



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## Do...

- 11. Maintain minimal inventory; cull unprofitable cows, buy feed as needed. If you have extra dairy replacements, consider selling them. When selling animals, remember to consult your tax preparer concerning associated tax liabilities.
- 12. Sell nonessential capital items, including machinery and equipment, that is not needed to operate the business. Consider selling land not essential to the business, including timber. Remember to consult your tax preparer concerning tax liabilities of a sale.

Knoblauch, W. Do's and Don'ts for Dairy Farmers When Facing Financial Difficulty, March 10, 2018.



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## Business Assessment

- Repayment Capacity
  - What is the ability to service debt?
  - How much reserve after debt service is there?
  - How is annual capital replacement handled?
  - Are there sufficient earnings to service debt?
  - Is the ability to service debt limiting the ability to utilized debt?



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## Repayment Capacity Analysis

- Term-Debt Coverage Ratio
  - Capital debt repayment capacity / planned principal and interest payments
  - Was enough income produced to cover debt service?

WEAK	FAIR	STRONG
< 1.30	1.30 – 2.00	> 2.00



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## Repayment Capacity Analysis

- Replacement Margin Coverage Ratio
  - Capital debt repayment capacity / (planned debt payments + un-funded capital replacement)
  - Did you generate enough earnings to replace capital and pay debt?

WEAK	FAIR	STRONG
< 1.00	1.00 – 1.5	> 1.5



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### Do...

- 3. Meet with your lender and share your financial management analysis and cash flow projections. Communicate with your lender often and provide periodic updates regarding your financial situation.
- 5. If you have past due balances, meet with suppliers to develop payment arrangements.
- 13. Examine debt for possible benefits of restructuring or alternative financing.

Knoblauch, W. Do's and Don'ts for Dairy Farmers When Facing Financial Difficulty. March 10, 2018.



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### Business Assessment

- No one measure to look at- cumulative financial picture
- Where is the business in stage of maturity?
- How do the ratios compare to where you want them?
- How do they compare to where the bank wants them?
- What type of year was it for the industry?



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### Business Assessment

- Benchmark against industry data
  - Track business performance over time - trend analysis
  - Provide performance standards to monitor changes & analyze impact over time.
  - Identify areas to improve, emphasize, or discontinue.



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## Do...

19. Seek management advice and analysis assistance early from cooperative extension, consultants, FarmNet, and others.

Knoblauch, W. *Do's and Don'ts for Dairy Farmers When Facing Financial Difficulty*. March 10, 2018.



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## Resources for Business Assessment

- Business analysis programs
  - Cornell Dairy Farm Business Summary
  - Farm Credit Business Analysis
  - Dehm & Associates Dairy Dashboard
- Penn State Cooperative Extension
- Profit Teams
- Business consultants/Accountants
- Agri-service personnel



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## Decision Making



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## Economic Decision Making

- Does the proposed change *support the mission and vision of the business*?
- Is it profitable?
- How will it affect cash flow?
- Is it the best use of resources?



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## Don't....

1. Make decisions that will cause the problem to be worse a week, month, or year down the road.
2. Continue the same practices simply because you've always done it that way.

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## Mission & Vision

- Why are we in business?
- What is the goal of the current operating generation?
- Is there a successor generation?
- Does this move us in the right direction?



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## Do...

- 2. Complete a profitability and cash flow projection, for example, partial budget of the expected impacts of any changes made to improve the business.
- 4. Continually review and update cash projections and partial budgets. Cash flow management is the key to surviving difficult economic times.



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## Profitability

- How does it affect the profitability equation?
  - Generate more volume?
  - Change price?
  - Reduce operating expense?
  - Effect on investment?
- How does it affect rate of return?



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## Cash Flow

- How will the change be funded?
  - Operating cash flow?
  - Borrowing?
  - Contributed capital?
- How and when will change affect cash flow?
- Repayment period?



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## Use of Resources

- Is it the best use of limited resources?
- Total impact on the financial position of the business
  - Change in ratios
  - Timeline
- Evaluate other options objectively



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## Do...

- 4. Continually review and update cash projections and partial budgets. Cash flow management is the key to surviving difficult economic times.

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## Budgets

- Partial budget
  - Results of incremental change
  - Evaluate effect of one change at a time
- Whole farm budget
  - Projected earnings with cumulative changes
- Cash flow budget
  - Identify potential borrowing needs



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### Partial Budget

<u>Items That Add to Net Income:</u>	<u>Items That Reduce Net Income:</u>
Added Inflows	Reduced Inflows
<input type="text"/>	<input type="text"/>
Reduced Outflows	Added Outflows
<input type="text"/>	<input type="text"/>
Total (A) \$	Total (B) \$
Change in Net Income (A-B) \$	
Benefit/Cost Ratio (A/B)	

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### Cash Flow Partial Budget

<u>Items That Add to Cash Flow:</u>	<u>Items That Reduce Cash Flow:</u>
Added Inflows	Reduced Inflows
\$ <input type="text"/>	\$ <input type="text"/>
Reduced Outflows	Added Outflows
\$ <input type="text"/>	\$ <input type="text"/>
Total (A) \$	Total (B) \$
Change in Net Income (A-B) \$	

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### Whole Farm Budget

	Base Year	Future Year	
		Without Change	With Change
Receipts	<input type="text"/>	<input type="text"/>	<input type="text"/>
Expenses	<input type="text"/>	<input type="text"/>	<input type="text"/>
Profit	<input type="text"/>	<input type="text"/>	<input type="text"/>
Cash Flow	<input type="text"/>	<input type="text"/>	<input type="text"/>
Percent Equity	<input type="text"/>	<input type="text"/>	<input type="text"/>

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## Budgets

- Must have accurate history to build off
- Evaluate more than one option
- Hard vs. Soft numbers
- Sensitivity analysis
  - Milk Price
  - Cost of Inputs
  - Regulatory changes, etc.



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## Do...

- 24. Forward contract inputs such as feed, fuel, and other supplies if you can lock in a profit.
- 25. Obtain price quotes from multiple suppliers for inputs such as feed, fuel, and other necessities.

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## Risk Management



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### Do...

- 22. Evaluate risk management tools such as crop insurance, livestock gross margin, and the margin protection program in order to minimize production and price risk.

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### Five Key Areas of Risk

- Production Risk
- Financial Risk
- Legal Issues Associated with Agriculture
- Human Resource Issues
- Marketing Risk



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### Risk Management

- Many different tools available to management various type of risks
- Tools transfer risk from business to a third party
- The third party takes on this risk for a fee, cost, premium, etc.
  - Private business: generate a profit by taking on this risk.
  - Government program: may be subsidized to a certain extent to achieve policy goals.



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### Self-Insurance Vs. Transferring Risk

- Every business is different.
- How comfortable is management with risk?
- What is the cost?
- What is the exposure?
- What are the issues associated with self insuring?



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### Self Insurance vs. Transferring Risk

- Key management question
  - What is the financial health of the business?
- The financial health of the business impacts the ability to self-insure.
  - Stronger= easier to self-insure
  - Weaker= increased interest in risk management tools



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### Do...

- 16. Communicate current financial situation often with management team/family members. Seek and welcome their suggestions and involve them in key financial decisions.

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## Business planning is always important!

- With increased uncertainty, increased emphasis on
  - Knowing your numbers
  - Assessing your business
  - Operational planning and strategic planning
  - Managing risk



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## Questions?

Anna Richards

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<https://prodairy.cals.cornell.edu/>



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## Resources:

"Understanding Financial Performance", Jason Karszes, Cornell Dairy Executive Program, PRO-DAIRY, December 2017

Knoblauch, Wayne. *Do's and Don'ts for Dairy Farmers When Facing Financial Difficulty*. March 10, 2018.



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