Dairy Financial Health Check-up: Key Measurements and Prescriptions

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University of Georgia

Three Areas of Sustainability

1. Financial
2. Personal
3. Environmental
Keys to Having a Sustainable Business

1. Determine where you want to go.
2. Decide how to get there.
3. Monitor your progress and make necessary adjustments.
4. Repeat as necessary.

Practically Speaking

1. Mission Statement – What are we doing here?
2. Goals – SMART (Specific, Measurable, Attainable, Relevant, Timely).
SMART Goals

* Specific – Precisely state what you want to do.
* Measurable – Assign an observable value to your goal. You can’t manage it if you can’t measure it.
* Attainable – Aim high, but be realistic.
* Relevant – if achieved will it matter?
* Timely – set a measurement time.

Examples of Good SMART Goals

* “Be milking _____ cows in ______ years.”
* “Reduce purchased feed or grain cost to _____% of expenses by ____________.”
* “Have the farm paid-off (debt-free) in ___ years.”
* “Take _____ hours off each week/month/year beginning in _______. ”
* “Watch the kids play _____ games this year.”
Practically Speaking

1. Mission Statement – What are we doing here?
2. Goals – SMART (Specific, Measurable, Attainable, Relevant, Timely).
3. Develop plans to achieve these goals.
4. Evaluate your progress in meeting these goals.
5. Review and adjust as necessary.

Today’s Objective

1. Present some Key Performance Indicators (KPI) for financial sustainability.
2. Help you set realistic goals.
3. Give you information about a way you can monitor your progress to that end.
Three Keys to Financial Sustainability

1. Profitability
2. Liquidity
3. Solvency

1. Profitability - indicates that value exceeds cost and is vital for long-term viability of any business.
2. Liquidity – indicates that the business can pay its bills as they come due.
3. Solvency – indicates the relative value business versus what is owed.
Financial Instruments You Will Need

* Farm production records
* Balance Sheets (AKA Financial Statement) for beginning and ending of the year
* Statement of Cash Flows (where did the money come from and where did it go)

Example Farm
Key Measures of Financial Sustainability

**Profitability**
- Return on Assets (ROA)
- Return on Equity (ROE)
- Operating Profit Margin

**Solvency**
- Debt to Asset Ratio
- Equity to Asset Ratio
- Debt to Equity Ratio

**Liquidity**
- Current Ratio
- Working Capital
- Working Capital Rule

Check-up time
Profitability - NFI

\[
NFI = \frac{\text{Cash Receipts} \pm \text{Inventory Change} - \text{Expenses} - \text{Depreciation}}{\text{Number of Operators or Families}}
\]

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Profitability - NFI

- Accounts Receivable
- Accounts Payable
+ Feed & Hay
+ Value of growing crops
+ Value of Market Livestock
+ Prepaid Expenses
= Inventory
Profitability - NFI

Decision-aid

Profitability - ROA

\[
ROA = \frac{NFI + \text{Farm Interest Exp.} - \text{Operator Mgmt. Fee}}{\text{Average Total Farm Assets}}
\]
Profitability - NFI

Decision-aid

ROA Performance

<table>
<thead>
<tr>
<th>Measure</th>
<th>Strong</th>
<th>Stable</th>
<th>Weak</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA – Mostly Owned</td>
<td>5%+</td>
<td>1-5%</td>
<td>1% or less</td>
</tr>
<tr>
<td>ROA – Mostly Rented</td>
<td>12%+</td>
<td>3-12%</td>
<td>3% or less</td>
</tr>
</tbody>
</table>
Solvency

Relative Financial Strength

Solvency – Debt/Asset Ratio

\[
\text{Debt - Asset Ratio} = \frac{\text{Total Farm Liabilities}}{\text{Total Farm Assets}}
\]
Profitability - NFI

Decision-aid

Debt-Asset Performance

<table>
<thead>
<tr>
<th>Measure</th>
<th>Strong</th>
<th>Stable</th>
<th>Weak</th>
</tr>
</thead>
<tbody>
<tr>
<td>Debt-Asset</td>
<td>40% or less</td>
<td>40-65%</td>
<td>65%+</td>
</tr>
</tbody>
</table>
Liquidity

Can you pay your bills?

Liquidity – Current Ratio

\[
\text{Current Ratio} = \frac{\text{Total Current Assets}}{\text{Total Farm Liabilities}}
\]
Profitability - NFI

Decision-aid

Current Ratio Performance

<table>
<thead>
<tr>
<th>Measure</th>
<th>Strong</th>
<th>Stable</th>
<th>Weak</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Ratio</td>
<td>150%+</td>
<td>100-150%</td>
<td>100% or less</td>
</tr>
</tbody>
</table>
Liquidity – Working Capital Rule

\[
\text{Working Capital Rule} = \frac{\text{Working Capital} \times}{\text{Total Expenses}}
\]

* Working Capital = Total Current Assets - Total Current Liabilities

Profitability - NFI

Decision-aid
Working Capital Rule Performance

<table>
<thead>
<tr>
<th>Measure</th>
<th>Strong</th>
<th>Stable</th>
<th>Weak</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working Capital Rule</td>
<td>50%+</td>
<td>20-50%</td>
<td>20% or less</td>
</tr>
</tbody>
</table>

KPI Performance Summary

<table>
<thead>
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<th>Measure</th>
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<td>40-65%</td>
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<td>Current Ratio</td>
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<td>100-150%</td>
<td>100% or less</td>
</tr>
<tr>
<td>Working Capital Rule</td>
<td>50%+</td>
<td>20-50%</td>
<td>20% or less</td>
</tr>
</tbody>
</table>
Operating Efficiency

Where does the money go?

Operating Efficiency

<table>
<thead>
<tr>
<th>Allocation of Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
</tr>
<tr>
<td>20%</td>
</tr>
<tr>
<td>40%</td>
</tr>
<tr>
<td>60%</td>
</tr>
<tr>
<td>80%</td>
</tr>
<tr>
<td>Net Income</td>
</tr>
<tr>
<td>Depreciation</td>
</tr>
<tr>
<td>Interest</td>
</tr>
<tr>
<td>Operating Expense</td>
</tr>
</tbody>
</table>
### Operating Efficiency

\[
\text{Operating Expense Ratio} = \frac{\text{Total Cash Farm Expense - Interest - Depreciation}}{\text{Gross Farm Income}}
\]

\[
\text{Depreciation Expense Ratio} = \frac{\text{Depreciation}}{\text{Gross Farm Income}}
\]

\[
\text{Interest Expense Ratio} = \frac{\text{Farm Interest}}{\text{Gross Farm Income}}
\]

\[
\text{Net Farm Income Ratio} = \frac{\text{Net Farm Income}}{\text{Gross Farm Income}}
\]

### Operating Efficiency Ratios Summary

<table>
<thead>
<tr>
<th>Measure</th>
<th>Strong</th>
<th>Stable</th>
<th>Weak</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Expense</td>
<td>60% or less</td>
<td>60-80%</td>
<td>80%+</td>
</tr>
<tr>
<td>Depreciation</td>
<td>5% or less</td>
<td>5-15%</td>
<td>15%+</td>
</tr>
<tr>
<td>Interest</td>
<td>5% or less</td>
<td>5-10%</td>
<td>10%+</td>
</tr>
<tr>
<td>Net Farm Income</td>
<td>20%+</td>
<td>10-20%</td>
<td>10% or less</td>
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Review and Adjust

KPI for 537 U.S. Dairy Farms in 2011

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KPI for 537 U.S. Dairy Farms in 2011

Tools to Help

* UGA-UF Benchmarking program
* AgPlan – www.agplan.umn.edu
Summary

1. Financial measures are just as (more?) important as production measures.
2. To be meaningful, measures must be associated with a goal.
3. The key components to financial sustainability are:
   1. Profitability
   2. Liquidity
   3. Solvency
4. If you must choose one measure use ROA
5. Consider enrolling in the UGA-UF Benchmarking program to monitor your progress.

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