Keeping Your Herd Profitable in Today’s Economic Environment

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TAKE HOME MESSAGES

• Maximize income over feed cost. Examine feed costs carefully, but don’t cut any costs that will decrease productivity.

• Maximize milk sold by filling the barn with productive profitable cows. Focus on transition cows to minimize early lactation culling/deaths and to maximize milk production.

• Focus on getting cows pregnant fast. Examine all herd level costs and consider cutting costs that will not affect productivity.

• Focus on milk quality.

• Evaluate all costs. Do not cut any cow care costs that will affect cow performance or health. Consider cutting herd operating costs.

• Get prepared for the next period of low profitability. It can be difficult to make necessary changes when profitability is low. Evaluate assets carefully and only invest in high returning assets and assets that fit with your long term goals.

Another excellent strategy is maintaining adequate working capital to allow the business to weather a down market.

INTRODUCTION

Based on milk futures, 2016 looks to be a challenging year for dairy profitability. Although feed costs have decreased, milk prices have decreased more. In 2015 cull cow and bull calf prices were high, buffering the decreasing milk prices. These prices have also dropped to more average historic levels. Most economists are not predicting a collapse of milk prices like in 2009, but because of higher costs many farmers will be below breakeven levels. This trend of boom and bust years are likely to continue into the future. The best is to prepare for the bad times, when times are good. It is important to have a plan to survive when the prices are low, but it is also equally important to have a strategy to prepare for the next downturn when it occurs.

STRATEGIES FOR 2016

Maximize income over feed cost

Profit is driven by income minus cost. The reason that high production is so important in increasing profitability is due to dilution of maintenance costs. The nutrient requirements of cows are made up of two components – maintenance and production. Maintenance requirements are the nutrients cows require to live every day. They are used to maintain metabolic functions such as walking around, breathing, digesting food and regulating body heat. After the entire maintenance requirement is met – then leftover nutrients can be used for milk production and other functions such as reproduction and growth. Generally higher milk production results in higher income over feed cost, even when milk prices are low and feed costs are high. Generally about one additional pound of feed dry matter will support two additional pounds of milk. Since a pound of dry matter is currently ten to 12 cents and milk is still over 14 cents per pound, making feeding changes that will cause a decrease in milk production will decrease profit. Figure 1 shows how higher production typically results in higher income.
over feed costs. Increasing production also dilutes all other direct and overhead costs on your dairy.

Cost structures are very different on dairies; however these same principles apply whether it is a 1000 cow dairy housed in freestalls or organic producers that are grazing. Within your dairy's cost structure invariably more milk means more profit.

This does not mean that you should ignore feed costs. Minnesota farm business management records consistently show that the highest profit herds achieve higher production per cow on similar or often lower feed cost per cow (Table 1). Many factors that influence high production may not be specifically related to the ration. These feeding related factors also have a large impact on how well rations perform.

- High quality forages
- Moldy, toxins and other anti-nutritional qualities
- Variation in rations and mixing
- Feeding times per day and pushups

Feed shrink is an insidious loss that is sometimes hard to recognize. If feed shrink on forages can be reduced from 30 to 15 percent and on concentrates from 10 to 5 percent, a 100 cow dairy farm could save $27,415 on feed costs. In addition to the shrink, the resulting forage would be higher quality, less likely to contain anti-nutritional factors and will support higher milk production.

Other important feeding factors to consider is feeding a ration to maintain good components. Never make ration changes that compromise herd health and future productivity.

Maximize whole herd milk production
Fill the barn with productive profitable cows. Here are some ideas to achieve this goal.

Focus on your transition cow program. Cows that transition well into production will have lower risk of early lactation culling/mortality and a reduced risk of becoming an involuntary cull. These cows also have improved reproduction, and higher milk production. A reasonable goal for early lactation culling is to have less than 5% of cows leave the herd before 30 days in milk and less than 8% leave before they reach 60 days in milk.

Replacement cost is the second or third largest cost on dairy farms. Reducing involuntary culls by breaking fewer cows will result in fewer replacements needed and cows spending more time in later, higher producing lactations. Many involuntary culls are man-made. Evaluate culls and determine if there are any management strategies that can be implemented to reduce involuntary culls.

Get cows pregnant fast
Getting cows pregnant fast means cows spend a higher percent of their lifetime in early lactation. Pregnancy rates have improved over the past decade and currently average 17% for upper Midwest herds on DHI with 35% of herds above 20%. Table 2 shows the increase in profitability with higher pregnancy rates. Increasing a herd’s pregnancy rate from 15% to 22% will increase profit by over $100 per cow per year.

Here are some minimum reproduction goals that all herds should aspire to achieve:

- Pregnancy rate: >22%
- Cow inseminated within 21 of end of VWP: >90%
- Cow pregnant by 150 DIM: >70%
- Lactating herd confirmed pregnant: >50%
- Cows culled for reproduction: <5%
- Age at first calving: 22-24 months
**Make high quality milk**
Even though milk quality premiums have decreased, cows with lower somatic cell counts produce more milk, have improved reproduction and are less likely to be culled. Table 3 shows the improved profit of a lower somatic cell count.

**Cut costs intelligently**
There are two different categories of costs on a dairy, “cow care costs” and “herd operating costs.” Cow care costs are costs dedicated to caring for the cows. Cow performance could potentially be affected if these costs are cut. Cow care costs can be examined, but no cuts should be made if they affect the cow.

Cow care costs include items such as:
- Feed
- Cow care labor/transition cow observation and care
- Bedding
- Veterinary costs and vaccines
- Cow prep
- Reproductive aids
- Hoof care

Herd operating costs are costs that will not affect cow performance. They should be scrutinized closer and cut whenever possible. Even though some of these may improve long term profitability, these should be cut before cutting any cow care costs. Be careful not to let preventative maintenance slip.

Herd operating costs include such items such as:
- “Needs” vs “Nice to have”
- Equipment that does not affect the cow
- Expensive semen
- Genomic testing

**GET READY FOR THE NEXT DOWNTURN**
Periods of high and low profitability in agriculture is inevitable. One key to surviving periods of low profitability is to develop a strategy during periods of good profitability to position your business for the downturn. One strategy is to consistently use risk management tools to manage your margin. Unfortunately sometimes the market does not allow you to lock in profitable margins. Then the goal is just to minimize the loss and be better prepared for periods of losses. Here are some ideas to be better prepared for the next period of low profitability.

**Look for lazy assets**
Optimize the use of existing assets. Is the parlor underutilized? Can you add cows with minimal or no investment. On dairy farms, typically cows are the most valuable income producing asset. Owned land can reduce feed cost risk and allows for better use of manure, but may not provide a high short/intermediate return. Look for assets that are underutilized that can be sold. Consider sharing expensive equipment with other farmers. Consider having land custom farmed or rent cropping equipment. This currently might be a challenge because of the depressed value for machinery. Only invest in assets that help you reach your long term goals.

**Maintain working capital**
One of the most effective methods of surviving a downturn is to have adequate working capital. Working capital is current assets minus current liabilities. Sipiorski recommends that dairy farms should have $2 of current assets for every $1 of current liability or a 2:1 ratio. This means you have twice the amount of current assets of cash, feed, and other current assets which will be turned into cash in the next 12 months compared to the current liabilities of bills owed and principal due in the next 12 months (Sipiorski and Kohl). Another recommendation is to maintain $200 to $600 per cow in working capital depending on your debt structure and profitability (Sipiorski).
Figure 1. Margins and feed costs at different production levels

Feed = 11¢/lb of DM
Milk price = $14.50

<table>
<thead>
<tr>
<th></th>
<th>50</th>
<th>60</th>
<th>70</th>
<th>80</th>
<th>90</th>
<th>100</th>
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<tbody>
<tr>
<td>Milk/Cow</td>
<td>19,559</td>
<td>23,189</td>
<td>25,115</td>
<td>19,507</td>
<td>23,640</td>
<td>25,356</td>
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<td>Net Return/cow</td>
<td>$-659</td>
<td>$283</td>
<td>$848</td>
<td>$218</td>
<td>$1,237</td>
<td>$1,669</td>
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<tr>
<td>Feed Cost, $/cow (cwt)</td>
<td>$2,427</td>
<td>$2,410</td>
<td>$2,365</td>
<td>$2,237</td>
<td>$2,424</td>
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<td>IOFC</td>
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<td>8.7</td>
<td>10.15</td>
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Table 1. Profitability of Minnesota Dairy Herds (University of Minnesota Fin Bin data)
Table 2. Value of improved pregnancy rate

<table>
<thead>
<tr>
<th>21 d Pregnancy rate</th>
<th>Repro Cost</th>
<th>Increase in Net Return</th>
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<tbody>
<tr>
<td>16</td>
<td>$21</td>
<td>$22.78</td>
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<tr>
<td>18</td>
<td>$23</td>
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<td>26</td>
<td>$31</td>
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1 Cabrera – dairy reproductive analysis online tool – Assume a $20 repro cost with the 15% pregnancy rate.
2 Reproductive cost/cow/month for all open cows
3 Increase in annual net return per cow compared to a 15% pregnancy rate

Table 3. Value of lowering somatic cell count

<table>
<thead>
<tr>
<th>Item</th>
<th>300,000 SCC</th>
<th>200,000 SCC</th>
<th>100,000 SCC</th>
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<tbody>
<tr>
<td>Clinical</td>
<td>$39</td>
<td>$54</td>
<td>$64</td>
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<tr>
<td>Production</td>
<td>$17</td>
<td>$33</td>
<td>$50</td>
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<tr>
<td>Premiums</td>
<td>$24</td>
<td>$83</td>
<td>$154</td>
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<tr>
<td>Culls/Deaths</td>
<td>$16</td>
<td>$28</td>
<td>$37</td>
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<tr>
<td><strong>Annual increased profit/cow</strong></td>
<td><strong>$96</strong></td>
<td><strong>$198</strong></td>
<td><strong>$305</strong></td>
</tr>
</tbody>
</table>

1 Fetrow – S-MP-3: Annual increase in profit from reducing somatic cell count - spreadsheet
2 Increase in annual net return per cow compared to 400,000 SCC

REFERENCES