

# Dairy Industry Considerations for Restructuring: Obstacles and Opportunities



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**FOCUS** 

# Table of Contents

<b>1. Introduction</b>	3
Purpose, Objectives & Executive Summary	3
<b>2. Dairy Farm Economic Review: Microeconomic Considerations</b>	4-18
Microeconomics	5
Dairy Production Costs	6-7
Recent Feed Costs	8-10
Feed Combinations	11
Input / Output Commodity Relationships	12
Dairy Trends	13-15
Hedging Strategies	15-16
Reliability of Futures Pricing	17
Summary of Microeconomic Issues	18
<b>3. Dairy Farm Economic Review: Macroeconomic Considerations</b>	19-28
Background of the Dairy Industry	20
Milk Price and Production Background	20-22
Productivity Trends	22
Dairy Farm Trends	22-23
Milk Classifications	23-24
Milk Price Trends	24
Feed Costs Background	25-26
Slaughter Cow Pricing Background	27
Summary of Macroeconomic Issues	28
<b>4. Financial &amp; Operating Performance Review</b>	29-40
Strategy Overview	30-31
Debt Per Cow	32
Dairy Performance Matrix®	33
Dairy Performance Example	34-35
Break Even Cash Flow	36
Financial Leverage	37-39
Performance Analysis Flow Chart	40
Summary of the Performance Analysis of a Dairy Farmer	41
<b>5. Restructuring Considerations &amp; Alternatives</b>	42-51
Strategy Overview	43-44
Asset Value Information	45
Asset Location Analysis Overview	45
Asset Sale Information	46-47
Restructuring Considerations: Out-of-Court Restructuring & Court-Protected Restructuring	47-49
Court Appointed Receivership	49
Chapter 7 Liquidation	49-50
Chapter 11 Reorganization	50
Chapter 12 Reorganization	50
Summary of Restructuring Strategies	51
<b>6. Dairy Outlook Summary</b>	52-53
<b>7. Dairy Market News Terminology</b>	54-57
<b>8. About Focus</b>	58-60
<b>9. Contact</b>	60

## 1. Introduction

Focus Management Group has prepared this industry overview and restructuring strategy discussion (the “Paper”) to assist stakeholders in their review of portfolio dairy operators.

### Purpose

The purpose of this Paper is to provide:

- A single source for statistical information relating to the dairy industry in terms of both outputs and inputs.
- Background into dairy-related markets.
- Concepts relating to analyzing dairy farm financial operations and suggestions for restructuring efforts.
- Financial and operating analysis tools used to understand an operator’s ability to achieve break even.
- A framework for discussing restructuring alternatives with dairy farm clients or their stakeholders.

### Objectives

- Discuss the microeconomic environment in which a dairy operator conducts business. This includes the decisions that an individual operator has control over and the economics of an individual dairy farmer.
- Discuss the macroeconomic environment which impacts the dairy operator, including milk sales price, feed cost issues, and external forces that impact a dairy operator’s ability to break even and provide a return to stakeholders.
- Address the methodology used to assess an operator’s opportunities for successfully achieving break even operations before debt service, and an operator’s ability to service various levels of debt. This will include a discussion of the complexities of the interaction between milk prices, feed costs, and production per cow.
- Identify financial and operating information needed to adequately assess restructuring efforts, including performance of the operation, asset valuation and debt levels.
- Address out of court and court protected restructuring opportunities and potential strategies.

While the understanding of the marketplace and the operations of the dairy farmer are being developed from a financial and operating perspective, it is important to conduct a thorough

legal review of loan documents, debt levels, unsecured debt, existing contracts, etc. that is part of any restructuring effort. There are unique aspects relating to dairy farm restructuring efforts which will be raised during this discussion.

### Executive Summary

The dairy farmer operates in this economic environment:

- The price a dairy farmer receives for milk produced is minimally impacted by the individual dairy farmer.
- Input and output pricing markets do not operate in complete harmony.
- Farm management is a complex undertaking marrying milk prices, feed costs per cow per day, and milk production per cow per day, with financial leverage decisions.
- Restructuring alternatives are complicated by the need to maintain the value, and lives, of the herd used to produce the product.
- Asset values for the collateral change independently of the financial performance of the farmer. Cattle values move with slaughter cow prices, real estate values move with overall real estate in a market and then are further complicated by single purpose structures.
- There is an industry wide transition to higher production per cow and fewer overall farmers. There is stability in the number of over 100 head dairy operations.
- Restructuring opportunities are expanded for smaller family farmers (generally those with less than \$3.5 million of debt) with the Chapter 12 bankruptcy alternative.

The future for dairy farmers is difficult to assess. Insight may be gathered by regularly reviewing futures prices, and performance risk may be reduced by continuing to improve efficiency

However, volatility in the markets (milk and feed) will always result in periods of tightening margins and periods of expanding margins. The successful dairy farmer must prepare for the periods of tightening by stockpiling cash and become adept at managing through high levels of uncertainty and, therefore, related risk. Restructuring efforts will require stakeholders to understand the risks and develop alternative strategies quickly.

A close-up photograph of green wheat stalks, showing the developing grain heads and the texture of the leaves. The image is slightly blurred, creating a soft, natural background.

## 2. Dairy Farm Economic Review Microeconomic Considerations

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### Economic Review of the Dairy Farm

In this section, we will examine the financial and operating decisions an individual dairy farmer must make. Simply stated, a dairy farmer feeds cows that produce milk, and then sells the milk. Decisions at each step of the process impact the ability to combine feed costs, production per cow per day, and milk prices to achieve break even operations before debt service.

**Milk Prices:** An individual dairy farmer is able to select the purchaser of milk and the grade or quality of milk produced. However, the base price a dairy farmer receives is impacted by Federal Milk Marketing Orders. Therefore, a dairy farmer is able to impact the price received for milk within a tight range based around the rules established in the milk marketing orders.

**Feed Costs:** An individual dairy farmer makes many decisions surrounding feed:

- How much feed to raise versus how much feed to purchase (investment in real estate is key to this decision)?
- How to purchase feed—hedging of prices, full year crop purchases, smaller more frequent purchases?
- What combination of feed to use? This is important as there are trade offs between type of feed and production per cow per day.

**Operating Costs:** An individual dairy farmer makes many decisions surrounding operating costs:

- Labor is a key component of the cost structure of a dairy farm. Family provided labor versus external labor impacts the ability to return cash to owners.
- Herd health related costs are a significant cost. There is a trade off between preventive health and cost, that each farmer considers when cash flow tightens.
- Other larger expense categories include insurance, property taxes, utilities, and maintenance and repairs.

**Debt Levels:** The debt structure used by an individual dairy

farmer varies, but typically includes the following:

- **Working Capital Line of Credit:** An asset based working capital line of credit is typically tied to the herd size, segmented by age and sex, and the feed inventory levels, segmented by feed type.
- **Term Debt:** Farmers typically use a combination of shorter term debt tied to equipment, and longer term debt tied to real estate. Many times equipment debt is provided by the manufacturer of the equipment and may be via a lease or a loan. Real estate debt is typically provided by a bank lender.
- **Farm Credit Services** is an active participant in the agricultural lending sector. Federal Land Banks were originally established with seed money from the US government, and have gone through several evolutions since inception, which occurred in the early 1900's. Farm Credit Services is currently structured as a cooperative providing lending tools to farmers.

The discussion of the microeconomic environment will begin by developing a better understanding of feed costs and operating expenses related to dairy farmers and then will look at the interaction between milk prices and feed costs.

It is important to understand terminology specific to the dairy farmer's financial performance. The primary metric by which dairies measure and manage their operations is dollars per hundred pounds of milk, often noted as "\$/hundredweight", or "\$/cwt." This measure references all revenue and expenses in terms of each hundred pounds of milk produced.

The \$/cwt measurement is calculated by dividing each expense line item by the total pounds of milk produced in a period and multiplying that by one hundred pounds. The cwt measurement and related \$/cwt calculations allow for universal comparison of cost components based on the average price received for milk.

## 2. Dairy Farm Economic Review Microeconomic Considerations

### Dairy Production Costs

Feed costs represent the largest single expense of any dairy operation. No dairy farm will succeed unless it is able to manage this line item component. Labor costs are typically the next highest variable expense. The Feed Cost/cwt is a factor of Average Milk Production/Cow/Day and the Average Feed Cost/Cow/Day. These components measure how efficiently a cow is converting feed inputs to milk. Different combinations of feed are able to produce dramatically different volumes of milk. Therefore, optimizing this feed combination to produce

the most milk at the lowest cost is the goal of any dairy. Table 2.1 is a simple table illustrating how dramatically the Feed Cost/cwt is affected when different volumes of milk/day are produced given an Average Feed Cost Cow/Day of \$5.25. In this theoretical example, Scenario 1 assumes a cow consumes \$5.25 of feed and produces only 30 pounds of milk, equating to a feed cost of \$17.50 per 100 pounds of milk. The subsequent scenarios show increased production efficiency, lowering the feed cost/cwt.

	Scenario					
	1	2	3	4	5	6
Avg Feed/Cost/Cow/Day	\$5.25	\$5.25	\$5.25	\$5.25	\$5.25	\$5.25
Avg Milk Production/Cow/Day (lbs)	30	40	50	60	70	80
Feed Cost/cwt	<b>\$ 17.50</b>	<b>\$13.13</b>	<b>\$10.50</b>	<b>\$8.75</b>	<b>\$7.50</b>	<b>\$6.56</b>

Basic economics state that as long as an operation is able to cover variable costs, it should continue to produce product in the short term. When Table 2.1 is modified to more closely represent an Income Statement format that includes "Other Variable Costs" (such as labor costs, repairs & maintenance costs, herd health costs) of \$6.00/cwt, it is able to quickly be seen that with Average Feed Costs/Cow/Day of \$5.25 and a Milk Price of \$16.50/cwt, a dairy must produce at least 50

pounds of milk/cow/day to cover its variable costs. Below this level it should cease operations. Above this level it is able to at least contribute towards its fixed costs in the short term until a more successful long term plan is able to be implemented. Assuming in this example the price received for milk stays at \$16.50, the operators of Scenarios 1 and 2 must either find a way to reduce the Feed Cost/Cow/Day or a way to increase the Milk lbs/Day produced if they are to stay in business.

	Scenario					
	1	2	3	4	5	6
Milk lbs/Day	30	40	50	60	70	80
Avg Feed/Cost/Cow/Day	\$ 5.25	\$ 5.25	\$ 5.25	\$ 5.25	\$ 5.25	\$ 5.25
Milk Price \$/cwt	\$ 16.50	\$ 16.50	\$ 16.50	\$ 16.50	\$ 16.50	\$ 16.50
Less: Feed Cost/cwt	\$ (17.50)	\$ (13.13)	\$ (10.50)	\$ (8.75)	\$ (7.50)	\$ (6.56)
Revenue Remaining for Other Costs	\$ (1.00)	\$ 3.38	\$ 6.00	\$ 7.75	\$ 9.00	\$ 9.94
Less: Other Variable Costs/cwt	\$ (6.00)	\$ (6.00)	\$ (6.00)	\$ (6.00)	\$ (6.00)	\$ (6.00)
Amount Remaining for Fixed Costs/cwt	\$ (7.00)	\$ (2.63)	\$ -	\$ 1.75	\$ 3.00	\$ 3.94

## 2. Dairy Farm Economic Review Microeconomic Considerations

### Dairy Production Costs (Cont'd)

Table 2.3 and Table 2.4 are two additional examples illustrating the impact of Average Feed Cost/Cow/Day increasing to \$6.25 and then decreasing to \$4.25.

Table 2.3	Scenario					
	1	2	3	4	5	6
Milk lbs/Day	30	40	50	60	70	80
Avg Feed Cost/Cow/Day	\$ 6.25	\$ 6.25	\$ 6.25	\$ 6.25	\$ 6.25	\$ 6.25
Milk Price \$/cwt	\$ 16.50	\$ 16.50	\$ 16.50	\$ 16.50	\$ 16.50	\$ 16.50
Less: Feed Cost/cwt	\$ (20.83)	\$ (15.63)	\$ (12.50)	\$ (10.42)	\$ (8.93)	\$ (7.81)
Revenue Remaining for Other Costs	\$ (4.83)	\$ 0.88	\$ 4.00	\$ 6.08	\$ 7.57	\$ 8.69
Less: Other Variable Costs/cwt	\$ (6.00)	\$ (6.00)	\$ (6.00)	\$ (6.00)	\$ (6.00)	\$ (6.00)
Amount Remaining for Fixed Costs/cwt	\$ (10.33)	\$ (5.13)	\$ (2.00)	\$ 0.08	\$ 1.57	\$ 2.69

Table 2.4	Scenario					
	1	2	3	4	5	6
Milk lbs/Day	30	40	50	60	70	80
Avg Feed Cost/Cow/Day	\$ 4.25	\$ 4.25	\$ 4.25	\$ 4.25	\$ 4.25	\$ 4.25
Milk Price \$/cwt	\$ 16.50	\$ 16.50	\$ 16.50	\$ 16.50	\$ 16.50	\$ 16.50
Less: Feed Cost/cwt	\$ (14.17)	\$ (10.63)	\$ (8.50)	\$ (7.08)	\$ (6.07)	\$ (5.31)
Revenue Remaining for Other Costs	\$ 2.33	\$ 5.88	\$ 8.00	\$ 9.42	\$ 10.43	\$ 11.19
Less: Other Variable Costs/cwt	\$ (6.00)	\$ (6.00)	\$ (6.00)	\$ (6.00)	\$ (6.00)	\$ (6.00)
Amount Remaining for Fixed Costs/cwt	\$ (3.67)	\$ (0.13)	\$ 2.00	\$ 3.42	\$ 4.43	\$ 5.19

## 2. Dairy Farm Economic Review Microeconomic Considerations

### Recent Feed Costs

Chart 2.5 shows the recent history of average US Feed Costs/Cow/Day assuming a yield of 65 pounds of milk per day. This is based upon a formula used at Penn State University consisting of a fixed ration per cow per day of corn (22.2 lbs.), soybean meal (2.5 lbs.) and hay (25.5 lbs.). Higher fuel costs, increased exports and lower grain inventories are resulting in higher corn and soybean prices, directly impacting dairy feed costs in 2011 as shown by the columns in red.

Chart 2.5: Dairy Feed Cost/Cow/Day-US

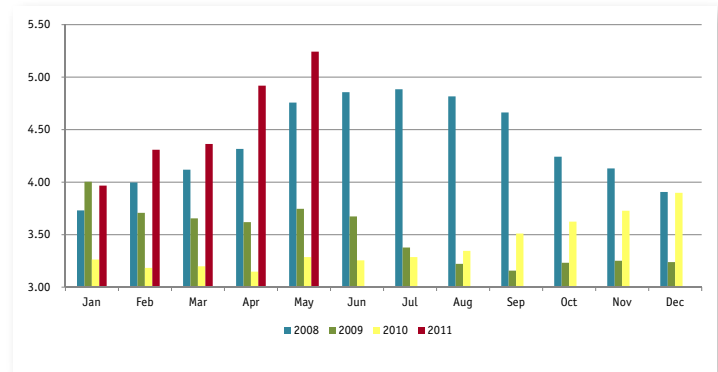
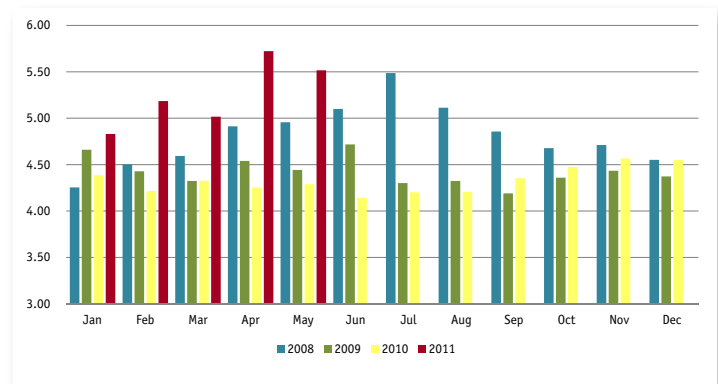


Chart 2.6 shows the recent history of average Feed Costs/Cow/Day in Texas assuming the same yield of 65 pounds of milk per day. Whereas average US feed costs (Chart 2.5) dropped to almost \$3.00/Cow/Day in 2009 and 2010, the average Texas feed cost remained elevated at over \$4.00 for this same period.

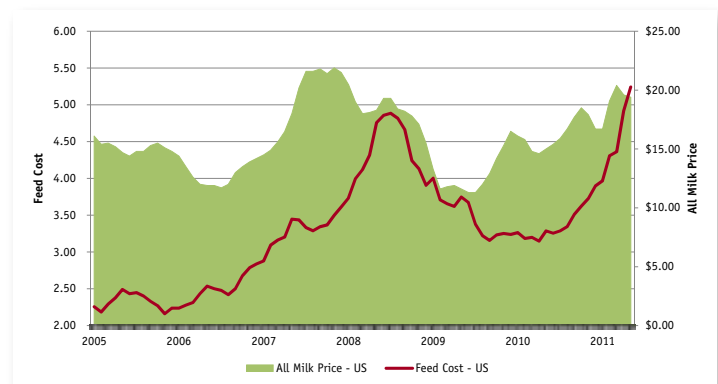
Chart 2.6: Dairy Feed Cost/Cow/Day-TX



The differences between the US chart and the Texas chart are indicative of the need to understand the variance between the overall US prices and the prices in the geographic region in which a farm is located.

A review of the relationship between US feed costs and milk prices below shows that the economic conditions of 2008-2009 appear to be recurring in 2011. Milk prices will need to remain at current higher levels in order to withstand the run-up of input costs. Any decline in milk prices could be disastrous for dairies as they are still trying to recover from the crash of 2009.

Chart 2.7: US Dairy Feed Cost + Milk Price



## 2. Dairy Farm Economic Review Microeconomic Considerations

### Recent Feed Costs (Cont'd)

A review of the relationship between Texas feed costs and milk prices in Chart 2.8 shows fundamentals similar to those in the US as a whole, though with higher feed cost price spikes. Over the 2005–2011 time period, the average US milk price margin over feed cost has been \$0.15 higher than the same margin in Texas. Milk prices, like feed costs, vary by geographic region.

Charts 2.9 and 2.10 show 1) average feed costs/cow/day and 2) the average milk price for selected states Wisconsin, Iowa, Texas and Pennsylvania and the entire US. Not surprisingly, feed costs in Iowa and Wisconsin, two states in the heart of the corn belt, are lower than the US average. Texas and Pennsylvania, which are much farther removed from the corn belt, are examples that have feed costs higher than the US average.

Chart 2.8: TX Dairy Feed Cost + Milk Price

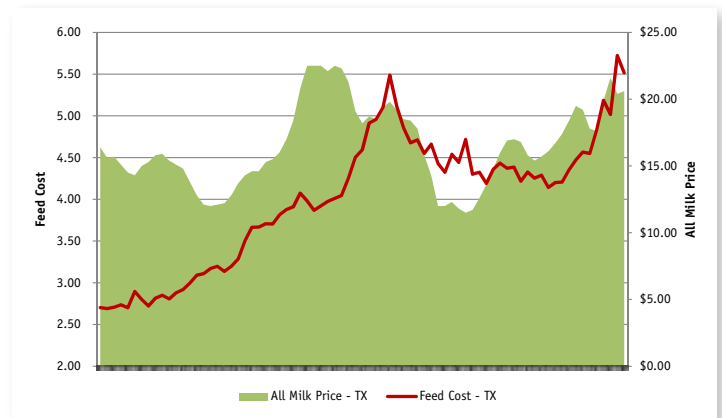


Chart 2.9: Dairy Feed Cost/Cow/Day

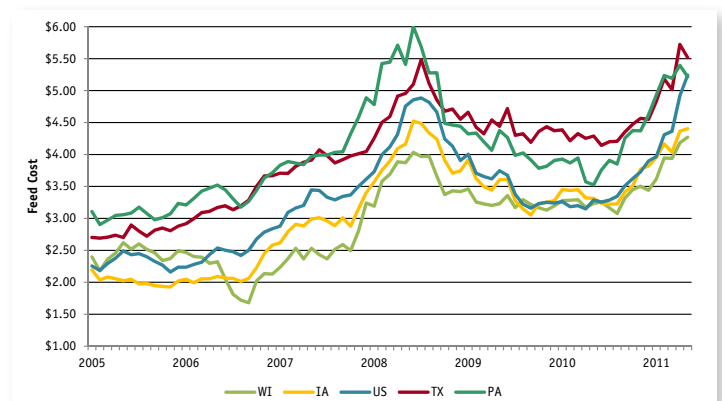


Chart 2.10: Average Milk Price



## 2. Dairy Farm Economic Review Microeconomic Considerations

### Recent Feed Costs (Cont'd)

Though there is some consistency in the movements of milk prices and feed costs irrespective of the state in which the farmer operates, the actual margin between milk and feed is not consistent across states.

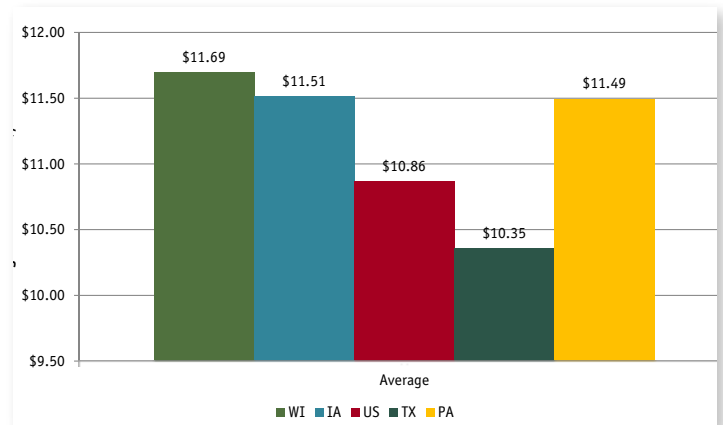
As seen in Table 2.11, Milk Margin Over Feed Cost \$/cwt has greatly fluctuated over recent years from a high of \$16-\$18/cwt in 2007 to a low of approximately \$6/cwt in 2009.

Table 2.11: Milk Margin Over Feed Cost \$/cwt



Table 2.12 below shows the Average Milk Margin over Feed Cost \$/cwt during the 2005-2011 time frame. Texas margins (shown in blue) were \$0.51 below the US average and were \$1.34 below Wisconsin averages.

Table 2.12: 2005-2011 Average Milk Margin Over Feed Cost \$/cwt



## 2. Dairy Farm Economic Review Microeconomic Considerations

### Feed Combination

A wide array of feed combinations exist for dairy cattle. The decisions behind these combinations are based on a multitude of internal and external variables.

- Market pricing of feed commodities is obviously a driving factor in determining the feed mix.
- The amount of farmland controlled by a dairy for feed production will determine how vulnerable the dairy is to swings in commodities pricing.
- The ability to hedge certain feed components as a measure to reduce risk may favor one mix over another.
- The breed of cows and the quality of genetics in the herd plays a role in determining optimal feed combinations.
- Feed combinations help to drive desired percentages of fat and protein in milk.
- The percentage of heifers, lactating, and non-lactating cows in the herd affects the need for specific feeds.
- Management decisions regarding culling and replacement of the herd may factor into feed combinations needed.

Table 2.13 above illustrates two different feed combinations, both of which are designed to produce similar amounts of milk. Scenario 1 has most of the feed concentrated in Corn Silage while Scenario 2 is much more diverse. Depending upon input prices for the various components, an operator is able to alter the inputs to minimize cost or to maximize milk production.

The importance of feed management and real time tracking of production levels by cow and by herd is critical and should not be overstated. As the largest single cost component in milk production, feed cost management will absolutely drive the success or failure of any dairy operation. It should be noted that a virtually unlimited number of feed combinations exist and Table 2.13 provides just two examples.

Ingredients	Scenario 1		Scenario 2	
	Dry Matter (lbs)	%	Dry Matter (lbs)	%
Blood Meal	0.75	1.4%	0.75	1.4%
Calcium Carbonate	0.65	1.2%	0.50	0.9%
Corn Silage	27.00	49.8%	15.00	27.6%
Dry Ground Shelled Corn	6.50	12.0%	12.00	22.1%
Expeller SBM	2.00	3.7%	3.32	6.1%
Hay	5.00	9.2%	-	0.0%
Haylage	-	0.0%	15.00	27.6%
Rumen	0.70	1.3%	0.25	0.5%
Soybean Hulls	3.00	5.5%	2.85	5.3%
Soybean Meal	3.90	7.2%	-	0.0%
Tallow	0.30	0.6%	0.50	0.9%
Urea	0.10	0.2%	-	0.0%
Vitamins/Additives	1.27	2.3%	0.10	2.0%
Whole Cottonseed	3.00	5.5%	3.00	5.5%
<b>Total Dry Matter (DM)</b>	<b>54.17</b>	<b>100.0%</b>	<b>54.27</b>	<b>100.0%</b>

Source: University of Wisconsin Extension

## 2. Dairy Farm Economic Review Microeconomic Considerations

### Input/Output Commodity Relationships

The summer of 2009 showed some inverse correlations between milk and feed pricing as milk prices finally rose and feed prices fell, providing some much needed relief for dairies.

The second half of 2010 has shown increases in milk prices as well as all of the feed inputs. Pricing for hay, another major component of dairy cow feed, is not traded on the Chicago Mercantile Exchange (CME). It has traditionally tracked closely with corn, suggesting that both hay and overall feed prices will be expected to remain high throughout 2011 and 2012.

Using July 2011 as a base month, available commodity futures indicate that Class III milk prices may decrease by more than 20% while soybeans remain relatively flat and corn sees a 5%-10% increase into the summer of 2012. Significant uncertainty still surrounds the volume and quality of the 2012 crops due to the severe weather events of 2011.

Dairies will need to be sensitive to these increases and look to modify feed mixes where possible.

Chart 2.14: Future Price Relationships

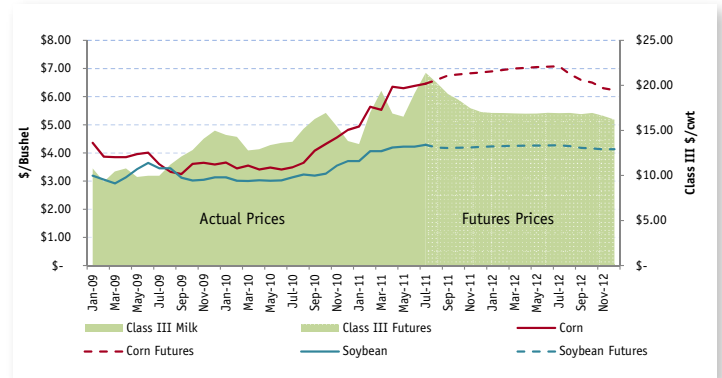
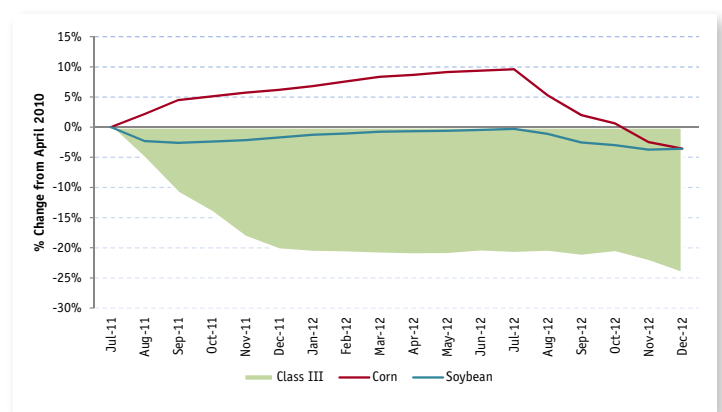


Chart 2.15: Milk and Feed Futures % Change (July 2011)



## 2. Dairy Farm Economic Review Microeconomic Considerations

### Dairy Trends

Class III milk prices have increased significantly from January to July 2011 (red line). However, Class III futures indicate that prices could drop from current highs to approximately \$17/cwt in 2012. This would result in Feed Cost/cwt (blue line) to consume 45-50% of total milk revenues.

This relationship is projected to be somewhat better than that of Spring/Summer 2009 when average Feed Costs topped 60% of revenues.

As shown in Chart 2.17, this relationship is significantly higher than in the 2005-2008 time frame where feed cost amounted to approximately 30% of the Class III milk price, indicating that the overall trend for dairy farms is not a positive one.

Chart 2.16: Projected Milk Price vs. Feed Cost (cwt)

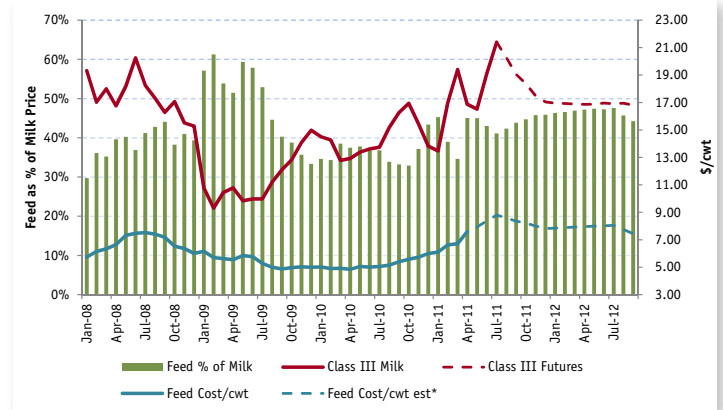
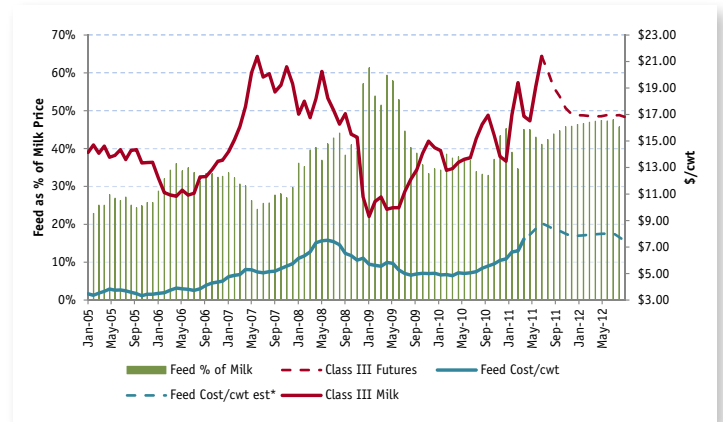


Chart 2.17: Projected Milk Price vs. Feed Cost (cwt)



## 2. Dairy Farm Economic Review Microeconomic Considerations

### Dairy Trends (Cont'd)

A review of historic milk prices in Chart 2.18, (red) shows that over time, volatility has increased significantly, largely as a result of reduced government intervention in dairy pricing and the maturation of the dairy futures market.

Over the 1990-2011 time period, the 24 Month Moving Average (green) has bottomed and is now trending higher. The long term trend for milk (blue) shows that overall, prices are continuing to increase and should average out at approximately \$15.50/cwt. Average Class III price over the 1990-2011 period has been \$12.92/cwt.

In viewing Chart 2.19, a more recent history of Class III milk prices, (red) shows that 2000-2011 prices are rising even faster than over the 1990-2010 period and are trending to maintain averages of \$16.00/cwt. The shorter 12 Month Moving Average (green) is also trending up.

Average Class III price over the 2000-2011 period has been \$13.48/cwt or \$0.56 higher than over the 1990- 2011 period.

As dairy farmers and their stakeholders evaluate their dairy operations, they should consider these upwardly trending prices as well as increased price volatility when considering restructuring opportunities.

Chart 2.18: Class III Milk Trends 2000-2011

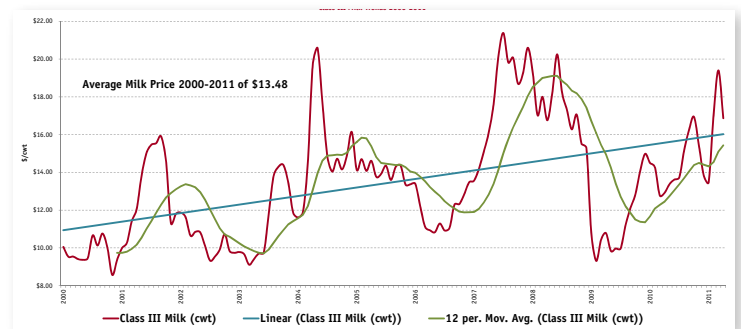
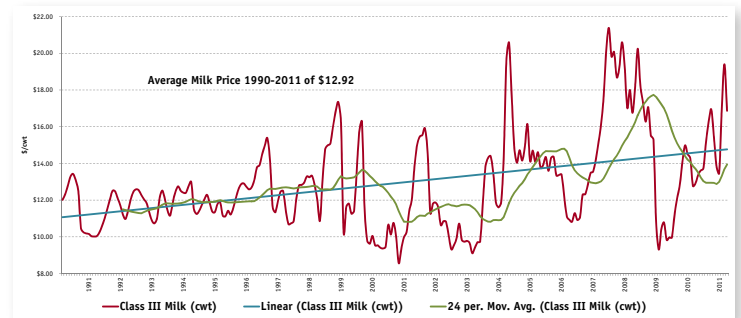


Chart 2.19: Class III Milk Trends 1990-2011



## 2. Dairy Farm Economic Review Microeconomic Considerations

### Dairy Pricing

Milk has four basic pricing levels:

- Class I—Beverage Milk
- Class II—Soft Manufactured Products (yogurt, cream, cottage cheese)
- Class III—Hard Cheeses and Cream Cheese
- Class IV—Dry Milk Products and Butter

Pricing for each class and producer is based upon the component values of the milk, producer price differentials and dairy product yields. In some cases the pricing for particular classes or products could be directly related to other classes or products. In other cases, different strategies for pricing may be used. Regional factors, basis adjustments and transportation considerations may also play a role in final pricing.

This information and statistics are gathered and published by the National Agricultural Statistics Service (NASS), a division

of the United States Department of Agriculture (USDA). Forward pricing for a number of products is tracked in the Commodities Futures Market at the CME.

### Futures Prices and Hedging

A producer of dairy products should be aware of the mechanisms available to minimize risk associated with the price they will receive for their product as well as the price paid for feed inputs. The CME facilitates the purchase and sale of futures contracts for Milk Class III, Milk Class IV, Nonfat Dry Milk, Dry Whey and Butter. Futures trading is also available for some dairy input costs such as Corn, Soybeans, Soybean Meal, Oats and Wheat.

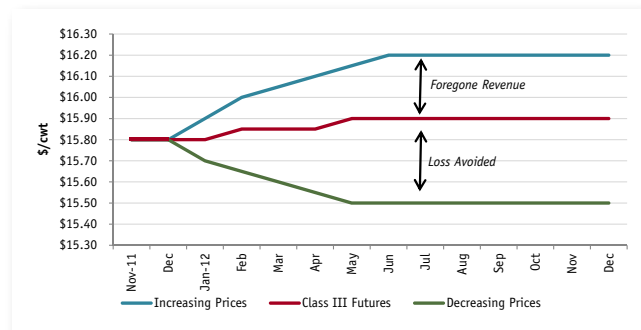
A proper hedging strategy should be implemented to reduce the risk associated with swings in commodities prices, which may impact both revenues and expenses, in order to secure an overall margin that is acceptable.

### Hedging Example: Milk Prices

Assume it is November 2011 and a dairy has tight control over its expenses and feels comfortable that current Class III prices in the \$15.80–\$15.90/cwt range would provide a desirable margin. Choosing to secure this margin, the dairy locks in the futures prices in red.

If actual prices INCREASE over time, the dairy will miss out on this additional revenue and only receive the contracted FUTURES price. However, if prices DECREASE over time, the dairy will still receive the same FUTURES price.

Chart 2.20: Hedging Milk Proceeds



## 2. Dairy Farm Economic Review Microeconomic Considerations

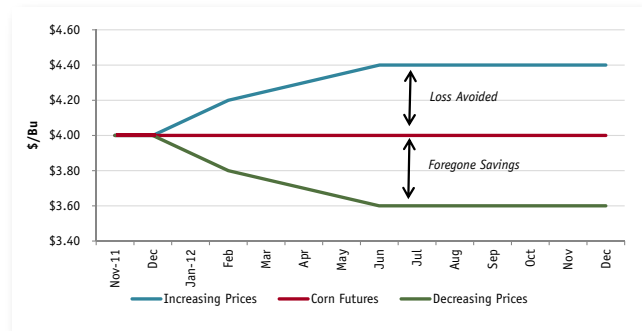
### Hedging Example: Feed Costs

Just as a dairy is able to hedge its income with futures contracts, it is also able to hedge some of its feed expenses. Below is a similar example in which a dairy hedges a certain amount of corn at an assumed futures price of \$4.00/bushel.

If actual corn prices INCREASE over time, the dairy will avoid the loss associated with this increase and only pay the contracted FUTURES price. However, if prices DECREASE over time, the dairy will still have to pay the agreed upon FUTURES price.

In a more complex scenario, a dairy could also purchase options on top of hedges to take advantage of upside potential without exposure to downside risk. This could apply to both feed inputs and milk outputs.

Chart 2.21: Hedging Feed Costs



### Hedging Example: Partial Hedge of Milk Price

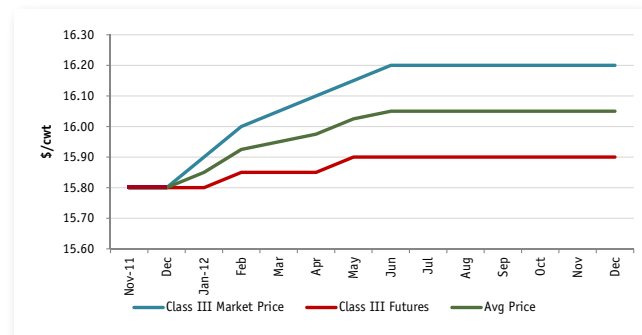
The previous examples assumed that the pricing for 100% of the feed volume and the milk volume was hedged. While it is possible to hedge the entire volume, a more conservative practice is to hedge a lesser percentage of inputs/outputs in case actual production does not match expected levels and the commodities pricing does not act as forecast via the futures pricing.

In Chart 2.22 to the right, the dairy hedged just 50% of its expected milk volume at a price between \$15.80 and \$15.90 (red) and left the other 50% open to fluctuate with the Class III market price (blue).

Since the dairy only hedged 50% of production, the resulting payments received by the dairy equal the simple average of the hedged and market prices (green).

Just as the dairy received a higher average price than would have been expected by hedging 100% of output, it could also have experienced lower than expected revenues had prices fallen below hedged levels.

Chart 2.22: Partial Hedging of Milk Prices



## 2. Dairy Farm Economic Review Microeconomic Considerations

### Reliability of Futures Pricing

As previously stated, a hedging strategy is designed to reduce the risk associated with swings in commodities prices in order to secure an overall margin that is acceptable. Though a hedging strategy may result in some missed opportunities for windfalls, pitfalls resulting in losses may also be avoided.

Futures prices offer a snapshot in time of market sentiment for the price of a commodity at various times in the future. Any number of local, regional or world events could cause sudden and dramatic changes in futures prices.

As an example of the possible relationships between futures prices and the ultimate settled price of a commodity, Charts 2.23–2.25 to the right each show a January 2 snapshot of Class III milk futures prices for 2007, 2008 and 2010.

The settled prices are also shown to demonstrate the predictive nature of the futures prices.

- January 2007—June 2008: Settled prices exceed futures prices by an average of 30%.
- January 2008—June 2009: Futures prices exceed settled prices by an average of 10%.
- January 2010—June 2011: Settled prices and futures prices are approximately equal on average.

As the data indicates, futures prices and settled prices vary significantly, reinforcing the notion that hedging should be used as a tool for budgeting or for margin protection, but not for speculation.

Chart 2.23: Comparison of Class III Futures Prices to Settled Prices  
Jan 2007–June 2008

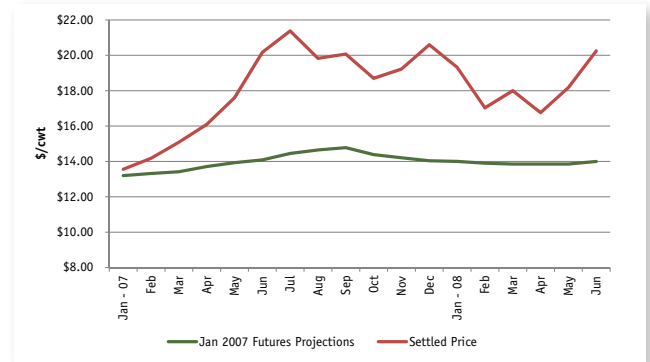


Chart 2.24: Comparison of Class III Futures Prices to Settled Prices  
Jan 2008–June 2009

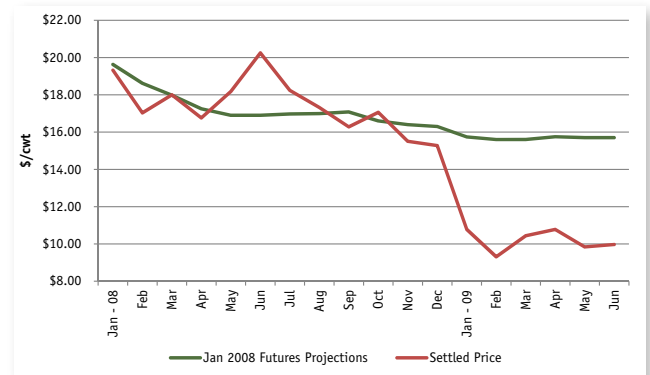
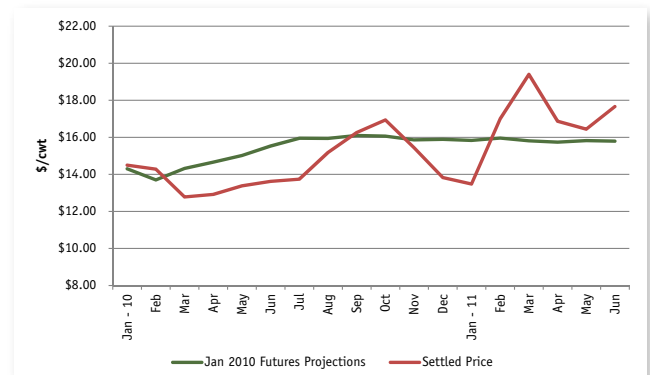


Chart 2.25: Comparison of Class III Futures Prices to Settled Prices  
Jan 2010–June 2011



## Summary of Microeconomic Issues

1. An individual dairy farmer has a limited ability to impact the price received for milk produced. The butter fat content, the protein content, bacteria levels, and the quality of milk produced impact the price received, but only within a tight range around the established market price.
2. An individual dairy farmer has more ability to impact operating costs, which are largely feed costs. While the overall market for feed certainly impacts the farmer and at times squeezes margins, the individual farmer has more opportunities to impact these costs through a combination of decisions such as growing feed versus buying feed, how feed is purchased, combinations of feed used and whether hedging strategies are employed.
3. The feed strategies used impact the quality and quantity of milk being produced.
4. Microeconomic issues are complex and may be difficult for non-dairy farmer stakeholders to understand. Dairy farmers often undertake complex discussions with lenders and stakeholders regarding feed decisions, production impacts and revenue generated. These discussions could appear circular as each decision affects multiple aspects of the microeconomic performance of the dairy farmer.

### 3. Dairy Farm Economic Review Macroeconomic Considerations





### 3. Dairy Farm Economic Review Macroeconomic Considerations

#### Background of the Dairy Industry

This section of the Paper will outline the macroeconomic issues confronting dairy farm operators in the United States.

Statistical information available from the USDA has been used to assist in developing this understanding of the current external environment's significant impact on the individual dairy farm operator.

To develop an understanding of the macroeconomic environment of the dairy industry, there are key understandings which must be discussed.

- Milk prices and feed costs are volatile, and do not necessarily move together for the benefit of the dairy farm operator. Milk (Class III milk) and feed inputs (corn, soybeans) are traded on the CME.
- Individual dairy farmers are unable to impact the price received for milk, except to influence the protein, fat and bacteria levels, and the quality level of the milk they produce. These factors do not influence the base price for milk but do affect quality premiums received for the milk.
- US dairy farmers were impacted by increased capacity at a time of decreased milk demand (2007 to 2009).
- The efficiency of US dairy farms is increasing the production per cow. This is in part causing a reduction in the need for dairy cattle and dairy farmers.
- The number of dairy operations with 99 or fewer milking cows continues to decrease, while the number of dairy operations with over 100 milking cows is stable. Larger farms are producing more of the overall milk produced, and using fewer animals to accomplish that.
- Of the 53,000 US dairies currently in operation, 16,000 dairies produce 85% of the milk.

#### Milk Price and Production Background

In 2009, the US Dairy Industry produced approximately 190 billion pounds of fluid milk from a herd of 9.2 million dairy cows. This represented approximately 17% of the USDA stated 2009 total world production of 1.1 trillion pounds of milk. 2010 US production rose to almost 193 billion pounds while overall herd size decreased by approximately 85,000 cows.

The US Dairy industry has always experienced volatility in pricing for milk and feed. For decades underlying milk price volatility was normalized through the government's intervention with support pricing programs. After these programs began to phase out in the 80s, the natural volatility of milk pricing slowly reappeared. However, recent volatility, specifically during 2007-2009, has shown faster movements and larger pricing swings over shorter time periods.

The US Dairy Industry is increasingly impacted by non-dairy issues such as the expansion of corn-based ethanol which contributed to the feed cost increases during 2007 to 2009.

The US Dairy Industry is increasingly impacted by changes in the world market for dairy products. For example, increased Asian demand for nonfat dry milk (NFDM) helped to send milk prices to record levels of almost \$22 per hundred pounds of milk (\$22/cwt) in November of 2007.

Increased prices for milk in 2007 inspired additional capital investment to enable US dairy farmers to produce even more milk to take advantage of the opportunity. At the same time US producers were ramping up production in 2008, the world economic slowdown initiated a major pull-back in worldwide consumption contributing to the collapse of milk prices in the winter of 2008/2009. From September, 2008 to February, 2009, the price for Class III milk dropped 36% from \$18.20/cwt to \$11.60/cwt. It has since rebounded and is expected to average \$18.00/cwt in 2011 but to decrease in price into 2012.

### 3. Dairy Farm Economic Review Macroeconomic Considerations

#### Milk Price and Production Background (cont'd)

Table 3.1 summarizes the United States' Class III Milk Price, the number of milk cows, and the milk production from 2005 through 2010, with an estimate for 2011. These statistics are for the US and are sourced from the USDA.

During this time period, the average annual price of milk has varied from \$11.89/cwt to \$18.04/cwt, which is a 51% variation in the base price for milk received by an individual dairy farm operator.

The number of milk cows rose briefly in 2008 in response to the 2007 increased milk prices. However, as of 2011 the number of milk cows has dropped back to the 2006/2007 levels. US milk production during this time period has also increased 10%.

As US production increased in 2007-2008 to capitalize on higher prices, overall world consumption decreased resulting in rapidly declining prices and over production/capacity. US milk production has been relatively stable when compared to total world milk production, with US milk production representing less than 1/6th of the world production.

Table 3.1

Average	Avg. All Milk Price - TX	YOY % Change	Milk Cows	YOY % Change	Milk Production	YOY % Change
Year	\$/cwt		(000s)		Mil lbs	
2005	14.05		9,041		176,989	
2006	11.89	-15.4%	9,132	1.0%	181,782	2.7%
2007	18.04	51.8%	9,189	0.6%	185,654	2.1%
2008	17.44	-3.4%	9,315	1.4%	189,982	2.3%
2009	11.36	-34.9%	9,201	-1.2%	189,334	-0.3%
2010	14.41	26.9%	9,117	-0.9%	192,819	1.8%
2011 est	18.00	24.9%	9,170	0.6%	195,264	1.3%

Source: USDA

Chart 3.2: US Milk Production

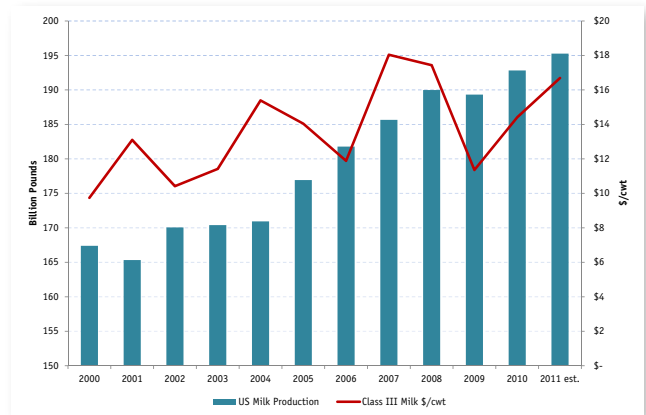
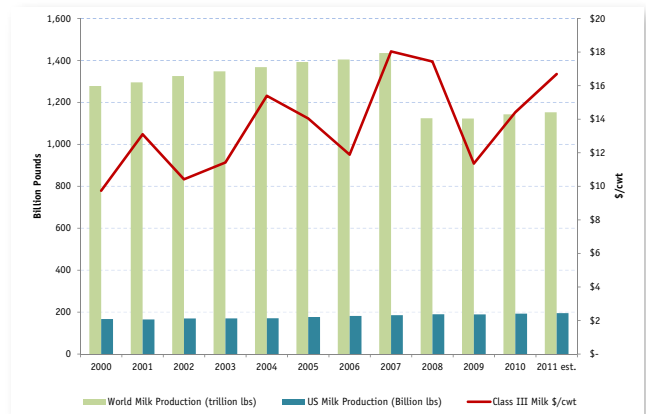


Chart 3.3: World Milk Production



### 3. Dairy Farm Economic Review Macroeconomic Considerations

#### US Milk Production and Demand (Cont'd)

The US is on track to produce approximately 195 billion pounds of milk in 2011, one third of which will be processed into fluid milk and cream products. The remaining two thirds will be used to produce approximately:

- 10 billion pounds of cheese
- 1.5 billion pounds of butter
- 1.5 billion gallons of ice cream
- 2.0 billion pounds of dry milk powders

In 2010, the US exported approximately \$3.8 billion of dairy products while imports totaled just \$2.6 billion, making the US a net exporter of dairy products. Exports amounted to approximately 13% of the total dry dairy goods produced.

Mexico and Canada were the largest importers of US dairy products, purchasing \$0.8 billion and \$0.5 billion respectively, up only slightly from 2009. Asian nations combined to purchase over \$1.1 billion for an increase of almost 100% over 2009, with much of the demand coming from a growing middle class.

Per capita consumption of fluid milk in the US has been steadily declining over recent years due in part to the increasing availability of other beverage alternatives.

Butter consumption has been relatively flat while dry milk good consumption has decreased as the availability and shelf life of liquid milk products has improved.

Increased cheese demand has been one of the major drivers for US dairy industry. Per capita cheese consumption has increased at approximately 7% per year over the last 20 years with Americans consuming over 30 pounds of cheese per person per year.

As milk prices dropped in 2009 (Table 3.1 on previous page), US dairies managed to reduce herd numbers and to increase milk production with fewer cows (Chart 3.4). Estimates for 2011 milk production are 5% higher than 2007 production even though the 2011 herd size is slightly less than that of 2007.

#### Productivity Trends

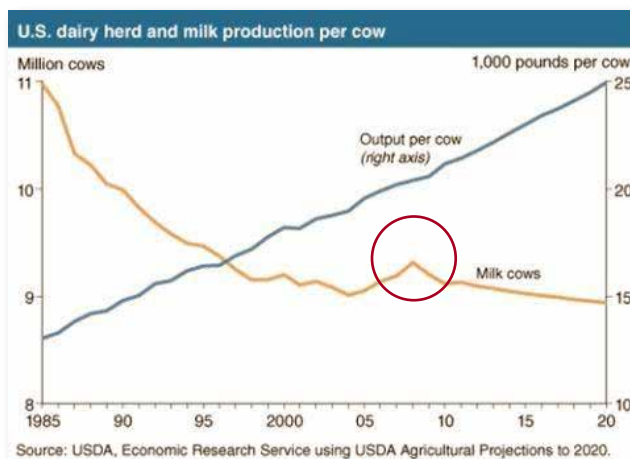
The USDA's Economic Research Service ("ERS") provides forward looking estimates for milk cow numbers and milk production in the US. The ERS estimates and forecasts are summarized in Chart 3.4 below.

After a four year increase in the number of milk cows from 2005-2008 (red circle), milk cow census fell in 2009 and 2010 and, despite a small increase in 2011, it is projected to continue year-to-year declines in 2012-2020.

Milk production is projected to continue rising in 2012-2020, as continued technological and biological developments increase milk output per cow.

Cow numbers are projected to decline at lower rates toward the end of the 2012-2020 projection period as the transition in most regions from smaller, diversified farms to larger, specialized dairy operations matures.

Chart 3.4



### 3. Dairy Farm Economic Review Macroeconomic Considerations

#### Dairy Farm Trends

Dairy farms continue to be consolidated into fewer, larger operations. As shown in Chart 3.5 the vast majority of dairy farms have 99 or fewer milking cows. The quantity of these smaller operations is decreasing, with the largest year-over-year decrease occurring in the 50-99 head category, dropping from 17.3 to 15.5 thousand in 2009-2010.

Chart 3.5: US Milk Cow Operations  
Number by Size Group, 2009-2010

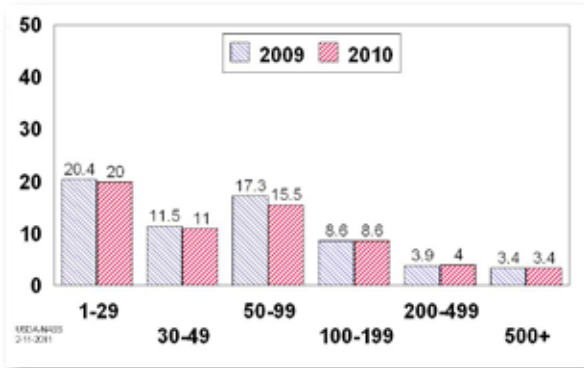


Chart 3.6 below identifies how the overall number of US dairy operations has decreased from approximately 650,000 in 1970 to approximately 60,000 in 2006. Operations are being consolidated into ever larger farms. USDA records indicate that this consolidating trend has continued through 2010 as total number of US dairy operations has decreased to just 53,000.

Chart 3.6: The Number of Dairy Farm Numbers is Declining, while Average Size is Growing

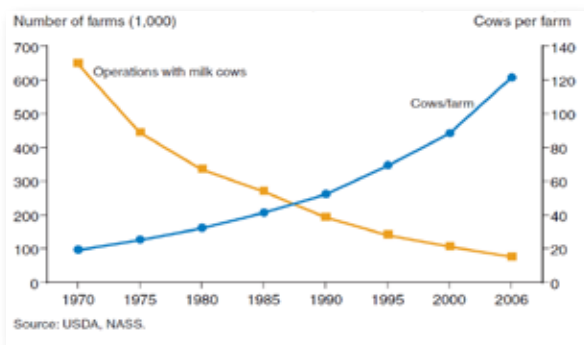
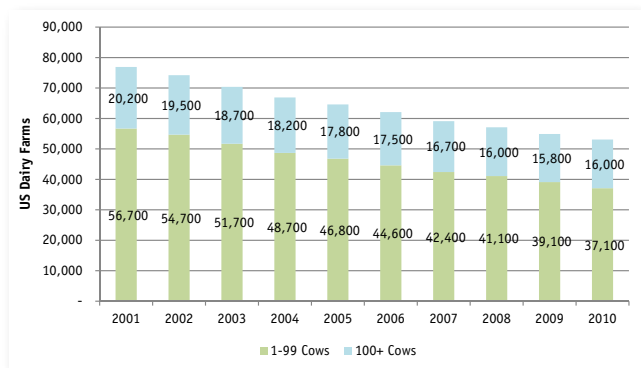


Chart 3.7 shows perspective on the consolidation trend of US dairy farms across the last decade, with the green portion representing herds of 99 or fewer cows and the blue portion of the bar representing herds of 100 or more cows. Smaller operations of 1-99 cows are rapidly being phased out, while overall US production increases due to increased production per cow and stable numbers of the larger 100 or more cow herds.

Chart 3.7: US Dairies by Number of Cows per Farm



#### Milk Classification

Federal milk marketing orders have created four basic classes in which all milk products fall. These classifications are differentiated by the minimum conditions under which milk handlers must operate.

- Class I—Grade A milk used in all beverage milks
- Class II—Grade A milk used in fluid cream products, yogurts, or perishable manufactured products
- Class III—Grade A milk used to produce cream cheese and hard manufactured cheese
- Class IV—Grade A milk used to produce butter

Although milk class pricing is based on a complex series of interdependent, dependent and regional formulas the classes generally tend to sell in similar ranges. As Class III milk is the relative standard for milk pricing and is traded on the CME, it will be the basis for most further pricing discussions.

### 3. Dairy Farm Economic Review Macroeconomic Considerations

#### Milk Price Trends

Chart 3.8 shows the different classes of milk tend to trade in similar ranges. Chart 3.9 shows the recent historic relationship between the Class III exchange rate price and the average price for all liquid milk.

The green trend line in Chart 3.9 reflects the spread of the Average All Milk price over the Class III milk price. From 2005-2008, the Average All Milk price ran at a premium to Class III of approximately \$1.50/cwt. This was the established value placed on the differential of standards between Class III dairies and the dairies of other classes.

Recent developments in 2010-2011 have widened this spread to almost \$3.50/cwt, indicating increased margins for dairies meeting the higher operational and facility standards required to produce the higher classes of milk. It is not yet known if this is a temporary or permanent shift in market dynamics. However, it is important to note that the trend is occurring because it may provide an opportunity for a producer to improve margins.

Traditional trading relationships between milk and some of its by-products are becoming less consistent. Chart 3.10 shows the reasonably strong historic correlation between milk (green) and butter (blue) as well as the lack of correlation between milk and Nonfat Dry Milk ("NFDm") (red). In 2008 (A), market conditions caused these correlations to be reversed when NFDm began to trade in line with milk while butter did not. Since 2010 (B), all three products have begun to trade with similar volatility.

Chart 3.8: Milk Class Price Trends

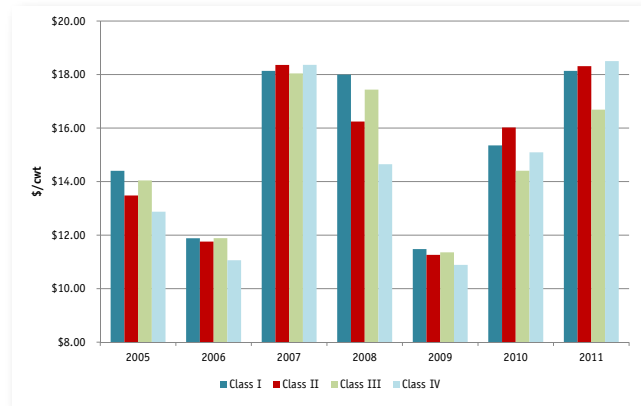


Chart 3.9: Relationship of Average All Milk and Class III Prices

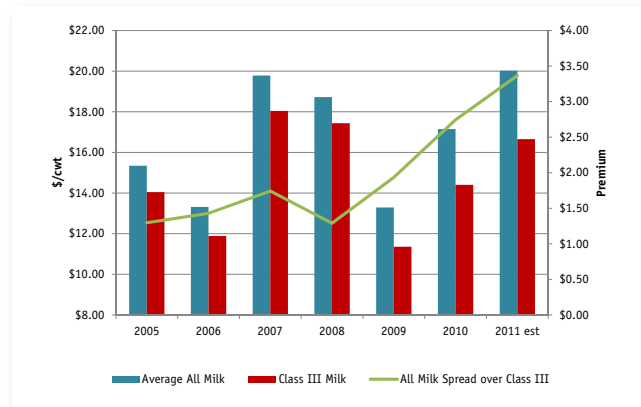
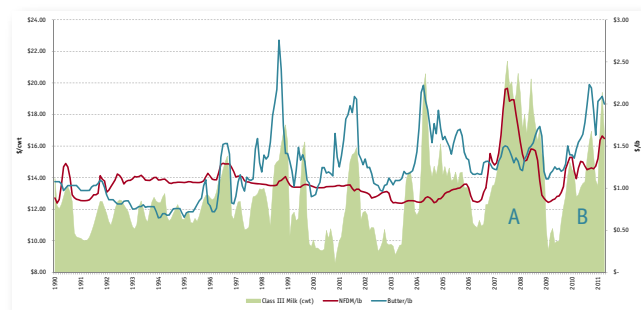


Chart 3.10: Class III Milk vs. Nonfat Dry Milk + Butter



### 3. Dairy Farm Economic Review Macroeconomic Considerations

#### Feed Cost Background

As milk prices rose to record highs in 2007-2008, so did the price for dairy feed and fuel inputs such as corn, soybeans and oil. Unfortunately for the dairies, the pricing for milk is only loosely driven by the prices of these other commodities.

By 2009, milk prices had fallen 15% below 2005 levels. However, standard corn/soy feed costs were 60% higher than 2005 levels. Whereas total reported Dairy Feed Cost in Texas represented just 28% of the Texas Average All Milk Price in 2005, feed cost had risen to over 50% of the Average All Milk Price in 2009. It

should be noted that the Average All Milk prices below are averages of all of the milk classes and therefore differ from Class III milk prices alone.

Crude oil prices saw a drastic pull-back in 2009. Crude prices in 2011 are projected to be 74% higher than those of 2005 while the 2011 Average Milk Prices in Texas are only 30% higher than those in 2005. Though milk prices have rebounded from the 2009 lows, input costs are increasing as well, keeping margins tight.

Table 3.11

Average	Avg. All Milk Price - TX	YOY % Change	Avg. All Milk Price - US	Dairy Feed Cost - TX	YOY % Change	Domestic Crude Oil	YOY % Change
Year	\$/cwt		\$/cwt	\$/cwt		\$/bbl	
2005	15.34		15.13	4.27		50.04	
2006	13.32	-13.2%	12.88	4.99	17.0%	58.30	16.5%
2007	19.78	48.6%	19.13	6.00	20.1%	64.20	10.1%
2008	18.73	-5.3%	18.29	7.40	23.4%	91.48	42.5%
2009	13.29	-29.0%	12.81	6.81	-8.0%	53.48	-41.5%
2010	17.15	29.0%	16.26	6.66	-2.1%	71.21	33.2%
2011 est	20.02	16.7%	19.04	8.08	21.3%	86.84	21.9%

Tables 3.12 and 3.13 compare the relationships between Average US Milk Price and Feed Cost with Average Texas Milk Price and Feed Costs. Average milk prices have been used rather than the publicly traded Class III prices in order to show regional price differentials for all milk produced.

Texas milk margins over feed cost have consistently lagged behind the US average, with the difference being a low of \$.24 per cwt in 2008 and a high of \$.96 in 2009.

Table 3.12

Average	Avg. All Milk Price - US	Dairy Feed Cost - US	YOY % Change	Margin	YOY % Change
Year	\$/cwt	\$/cwt		\$/cwt	
2005	15.13	3.57		11.56	
2006	12.88	3.85	-14.9%	9.04	-21.8%
2007	19.13	5.06	48.4%	14.07	55.7%
2008	18.29	6.72	-4.4%	11.57	-17.7%
2009	12.81	5.37	-30.0%	7.44	-35.7%
2010	16.26	5.22	26.9%	11.04	48.4%
2011 est	19.04	7.02	17.1%	12.02	8.9%

Source: USDA

Table 3.13

Average	Avg All Milk Price - TX	YOY % Change	Dairy Feed Cost - US	YOY % Change	Margin	YOY % Change
Year	\$/cwt		\$/cwt		\$/bbl	
2005	15.34		4.27		11.08	
2006	13.32	-13.2%	4.99	17.0%	8.32	-24.8%
2007	19.78	48.6%	6.00	20.1%	13.79	65.6%
2008	18.73	-5.3%	7.40	23.4%	11.33	-17.9%
2009	13.29	-29.0%	6.81	-8.0%	6.48	-42.7%
2010	17.15	29.0%	6.66	-2.1%	10.49	61.7%
2011 est	20.02	16.7%	8.08	21.3%	11.94	13.8%

### 3. Dairy Farm Economic Review Macroeconomic Considerations

Though milk prices have moved steadily upward from 2009 levels, so have the input costs required to produce the milk. 2011 corn, hay and soybean prices are at or above 2008 levels while crude prices are within 5% of 2008 levels. Especially hard hit are those dairy operations that sold or converted crop fields into expanded dairy production. Whereas these operations previously grew a portion of their feed needs, they now have greater exposure to market fluctuations as they must rely on outside sources for feed.

The recent flooding and extreme weather in the Midwest has significantly affected the 2011 planting season. An example of this is in Ohio where, as of June 1, 2011, only 20% of corn crops had been planted, which is 75 percentage points below the state's five year average for that date. Legislation requiring increases in ethanol production has led to a dramatic shift in the percent of corn devoted to ethanol. This caused both a spike in 2004 corn production and a short term drop in prices.

In 2004 only 10% of the 300 million tons of corn produced in the US went to ethanol. By 2009, a full 25% of corn produced went to ethanol though total corn production had not materially changed. This resulted in a spike in pricing of over 200%, directly affecting the cost of feed for dairy cows.

All indications are that the percentage of US corn used for ethanol will only increase due in part to the continued use of government subsidies and the growing trend of exporting subsidized US ethanol to other countries.

Table 3.14: Class III Milk vs. Feed Input Pricing

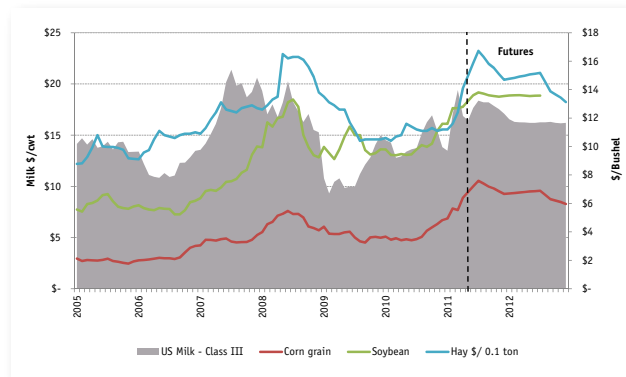


Table 3.15: Domestic Crude Oil Prices (\$/bbl)

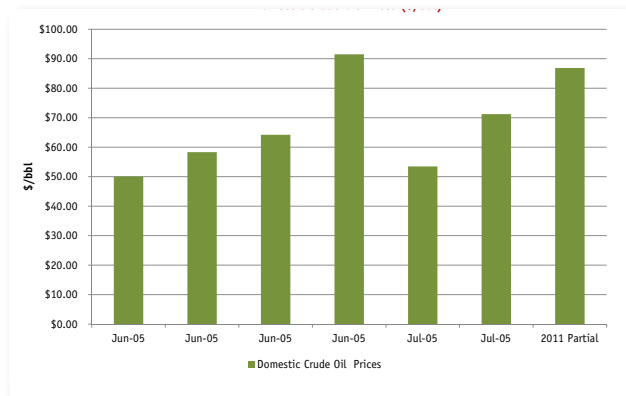


Table 3.16: Effect of Ethanol on Corn Prices

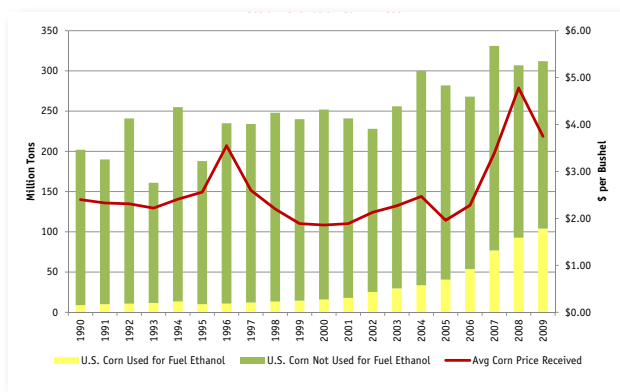
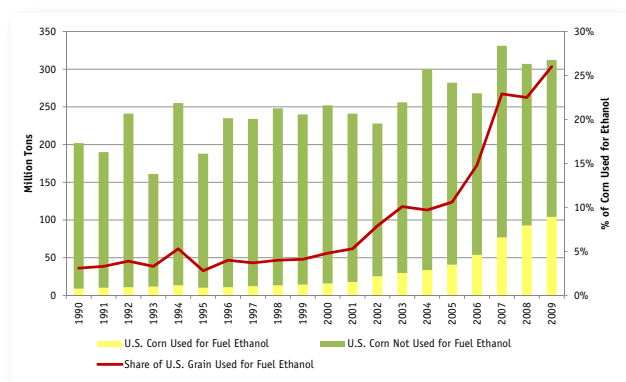


Table 3.17: Percent of Corn Used for Ethanol



### 3. Dairy Farm Economic Review Macroeconomic Considerations

#### Slaughter Cow Pricing Background

The dairy farmer's cattle herd is a significant component of the asset structure of a dairy farm. While there are registered or pedigreed dairy cattle that sell at higher prices, the majority of the investment in dairy cattle is converted to cash at slaughter cow prices.

When considering converting the herd to cash, there may be opportunities to sell a portion of the herd as milking cows, rather than slaughter animals. The age of the cattle, and the number of days milking cows have been milking since their last calf was born, may create opportunities to sell a portion of the herd as milking cows to other dairy farmers in a close proximity to the farm. There are complexities with this type of sale, such as geographic proximity and the ability to transfer cattle safely while maintaining milking capabilities. However, the return on a portion of the herd may be increased if this type of herd segmentation and sale is negotiated.

Therefore, when considering the value of the cattle herd, it becomes important to understand the market for slaughter

cows. It is also important to understand the lending structure surrounding the cattle herd. Different lenders use different lending advance strategies—some lenders advance a percent of the average slaughter cow price, while other lenders advance a multiple of typical cash flows generated by the dairy herd of the farmer borrower.

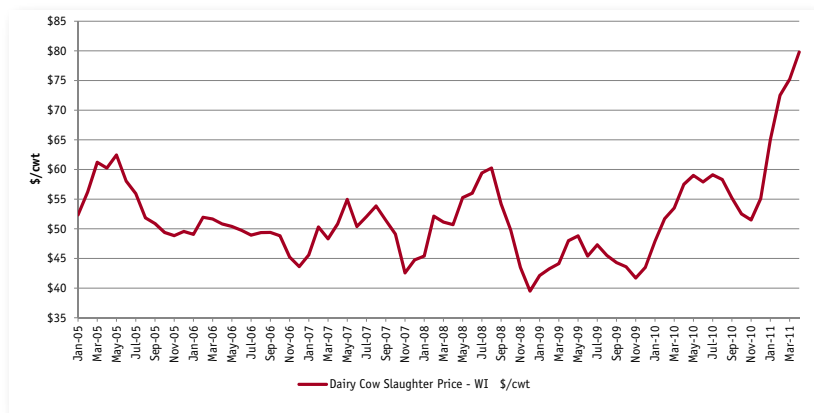
In an effort to reduce cost and overhead in light of falling milk prices in 2009, many dairy farmers initiated a reduction in herd size. For some operations, this was simply a failure to replenish the herd after older or non producing cows were naturally sent to slaughter. For others this was a massive sell-off of dairy cows to reduce the size of the operation.

Just as the price for milk collapsed in 2008/2009 winter, so did the slaughter price for dairy cows, resulting in a depressed prices for any cows sold in an attempt to reduce herd size. With both milk prices and herd sizes rebounding, 2011 has seen advancement in slaughter prices as fewer cows are brought to market and international demand for beef grows.

Table 3.18

Average Year	Average # Milk Cows (000s)	YOY % Change
2005	9,041	
2006	9,132	-13.2%
2007	9,189	48.6%
2008	9,315	-5.3%
2009	9,201	-29.0%
2010	9,117	29.0%
2011 est	9,170	16.7%

Table 3.19: Dairy Cow Slaughter Price Received \$/cwt





## Summary of Macroeconomic Issues

1. Milk prices and feed costs are volatile, and do not move together for the benefit of the dairy farm operator.
2. US dairy farmers were impacted by increased capacity at a time of decreased milk demand (2007 to 2009).
3. The efficiency of US dairy farms is increasing the production per cow. This is in part causing a reduction in the need for dairy cattle and dairy farmers. The number of dairy operations with 99 or fewer milking cows continues to decrease, while the number of dairy operations with over 100 milking cows is stable. Larger farms are producing more of the overall milk produced, and using fewer animals to accomplish those production levels.



#### 4. Financial & Operating Performance Review



## 4. Financial & Operating Performance Review

The previous sections of this Paper developed an understanding of the external factors (macroeconomic) and the internal decisions (microeconomic) affecting dairy farm performance. In this section, the Paper will address how to analyze the performance of dairy farm operators and assess their ability to successfully restructure.

To accomplish this objective, it will be necessary to gather and analyze financial and operating performance data in relation to the multiple variables (milk prices, per cow production levels, and feed costs) which will impact financial performance.

Focus Management Group has developed a financial analysis tool which, based on an individual producer's financial and operating information, provides an assessment of a number of those combinations of variables which would result in break even or positive cash flow. The tool we use is the Dairy Performance Matrix® ("DPM").

The Dairy Performance Matrix® organizes a dairy's own historical data on revenues, expenses, herd allocation and milk production to produce a detailed matrix enabling the dairy, or its stakeholders, to visualize at a glance the combinations of internal and external movements in milk prices, feed costs, and production per cow that would result in break even operations or cash to support debt service and return to investors.

Building on the understanding of the various combinations of milk price, feed costs and production per cow that an individual dairy farmer has available to achieve break even from operations, the modeling tool then considers the farmer's leverage position and ability to service various levels of debt and various interest rates.

This section will explain that tool and show how the output will assist in the analyzing of restructuring alternatives.

### Strategy Overview

Base level performance data must be developed for the operation which is being reviewed for restructuring. This financial and operating information will provide the basis for the decision making process which will develop the restructuring plan for the operation under review.

This dairy specific data will be used in the Dairy Performance Matrix® to create an understanding of the number of combinations of milk prices, per cow production levels, and feed costs which would provide break even or better operations given the specific dairy's cost structures. This analysis will also assess an operator's ability to pay interest or repay debt, depending on inputs and assumptions utilized in the cost structure.

Once the Dairy Performance Matrix® for the dairy farm under review is developed, the output of this analysis will be used to determine the opportunity for successful restructuring. A flow chart then outlines the decision making process that will need to be employed with the dairy farm owner, the financial advisors, and legal counsel.

## 4. Financial & Operating Performance Review

### Debt per Cow

A common benchmarking tool in the dairy industry has been Debt per Cow. This number provides a simple metric describing the high-level financial health of the operation, with lower debt levels per cow clearly being more advantageous than higher debt levels per cow—especially during a period when the relationship between prices of milk and feed are stressed.

Basic tables such as Table 4.1 would indicate the debt level per cow a specific operation could support, however this high level analysis would do little to help identify pathways to success other than “spend less” or “make more.”

The complexity of the analysis an individual dairy farmer must develop resulted in Focus Management Group developing an analytical tool that would allow the analysis of multiple revenue and expense levels. The Focus analytical tool is the Dairy Performance Matrix® (“DPM”).

Table 4.1 looks at debt per cow ranging from \$3,000 per cow to \$6,000 per cow. For perspective, if one assumes a 100 cow herd, the dairy farmer’s debt would range from a total of \$300,000 to \$600,000 in this table. If the operation was a 500 cow herd, the dairy farmer’s debt would range from a total of \$1,500,000 to \$3,000,000. This includes both real estate or term debt, and operating lines of credit.

The costs used in this table are for example purposes only and should not be a performance benchmark used when analyzing dairy operations.

The importance of this type of analysis is to highlight the significant changes in a dairy farmer’s ability to service debt based on what is reasonable to expect a dairy cow to produce in exchange for a base level of feed.

Using a debt per cow strategy for lending creates an environment where lenders are providing cash flow loans based on a given herd size. Farmers find themselves driven to maintain herd numbers to maintain a borrowing base, even when a margin analysis and break even analysis may come to a different conclusion. Cash flow lending in an industry with margins that

are not able to be controlled by the individual dairy farm borrower creates multiple opportunities for failure of the borrower/lender relationship.

Many lenders have moved to an asset based lending structure to eliminate this cash flow lending, however, as shown in the previous sections, collateral values fluctuate significantly (slaughter cow prices for example).

Table 4.1

	Debt per Cow			
	\$3,000	\$4,000	\$5,000	\$6,000
Milk Sales (\$16.50/cwt) (Assumes 20,000 lb/cow/yr)	\$3,300	\$3,300	\$3,300	\$3,300
Less:				
Feed (\$5.50/day)	\$2,008	\$2,008	\$2,008	\$2,008
Vet Services	\$150	\$150	\$150	\$150
Utilities	\$100	\$100	\$100	\$100
Labor	\$400	\$400	\$400	\$400
<u>Other</u>	<u>\$400</u>	<u>\$400</u>	<u>\$400</u>	<u>\$400</u>
Major Variable Costs	\$3,058	\$3,058	\$3,058	\$3,058
Margin for Fixed Cost & Debt Service	\$243	\$243	\$243	\$243
Less:				
<u>Interest Only Debt Service</u>	<u>\$165</u>	<u>\$220</u>	<u>\$275</u>	<u>\$330</u>
Cash After Debt Service	\$78	\$23	(\$33)	(\$88)



## 4. Financial & Operating Performance Review

### Dairy Performance Matrix<sup>®</sup>

Our interactive Dairy Performance Matrix<sup>®</sup> is designed to evaluate the relationships between a dairy operator's:

- Milk Price Received
- Productivity of Milk Production
- Herd Allocation (cows in milk)
- Feed Costs
- Other Variable Costs
- Fixed Costs
- Amounts Remaining for Debt Service

What-if analysis capabilities are available to assist dairy farmers, their legal advisors, and their stakeholders in realizing the impacts to the bottom line from changes in production per cow, feed cost/cow/day, ratio of lactating to non-lactating cows, changes in milk prices, changes in labor costs, etc.

A results-oriented format serves as a basis for future budgets, allowing management to focus on targeted financial goals in order to achieve desired cash flows to support levels of fixed costs and levels of debt service.

The Dairy Performance Matrix<sup>®</sup> is scalable to any size dairy operation and gives immediate feedback to both dairy operators and their stakeholders regarding what steps must be taken and/or what market movements are needed to achieve success and enable repayment of debt.

The Focus model allows the dairy farmer or their stakeholders to determine the range of viable performance options both for covering fixed costs, and for providing an ability to generate EBITDA to service debt. For example, once data is input, the amount of "yellow" colored cells represents the number of combinations for generating positive EBITDA, whereas "red" cells are non-viable options.

An example of the Dairy Performance Matrix<sup>®</sup> output is shown on the following page. The specific metrics for the dairy being evaluated are shown in the middle of the page at the intersection of the arrows.

Viable options based on combinations of milk price, feed costs, cow productivity and other variable and fixed costs are mapped in yellow while non-viable options are mapped in red.

Table 4.2

<b>Dairy Performance Matrix</b>																				
Beginning Milk Price	\$	10.00																		
Beginning Milk Herd Lbs/Day		50.81																		
Avg Labor/cwt	\$	2.51	Cash Available for Fixed Costs																	
Avg Other Variable Costs/cwt	\$	2.27	Cash Not Available for Fixed Costs																	
Avg Other Fixed Costs/cwt	\$	0.63	Positive EBITDA																	
Addtl \$/cwt needed for VC	\$	(2.10)	Negative EBITDA																	
Addtl \$/cwt needed for VC & FC	\$	(1.47)																		
			Feed Cost/Cow/Day = \$5.35						Feed Cost/Cow/Day = \$5.85						Feed Cost/Cow/Day = \$6.35					
Avg Milk Production/Cow/Day (lbs)			51	56	61	66	71	76	51	56	61	66	71	76	51	56	61	66	71	76
<b>Break Even Milk Price - EBITDA Only</b>			\$ 15.94	\$ 14.99	\$ 14.21	\$ 13.54	\$ 12.96	\$ 12.47	\$ 16.92	\$ 15.89	\$ 15.03	\$ 14.30	\$ 13.67	\$ 13.12	\$ 17.91	\$ 16.79	\$ 15.85	\$ 15.06	\$ 14.38	\$ 13.78
Milk Price \$/cwt	\$	14.50	\$ 14.50	\$ 14.50	\$ 14.50	\$ 14.50	\$ 14.50	\$ 14.50	\$ 14.50	\$ 14.50	\$ 14.50	\$ 14.50	\$ 14.50	\$ 14.50	\$ 14.50	\$ 14.50	\$ 14.50	\$ 14.50	\$ 14.50	\$ 14.50
Avg Feed Cost/Cow/Day			\$ 5.35	\$ 5.35	\$ 5.35	\$ 5.35	\$ 5.35	\$ 5.35	\$ 5.85	\$ 5.85	\$ 5.85	\$ 5.85	\$ 5.85	\$ 5.85	\$ 6.35	\$ 6.35	\$ 6.35	\$ 6.35	\$ 6.35	\$ 6.35
Feed Cost/cwt			\$ 10.53	\$ 9.59	\$ 8.80	\$ 8.13	\$ 7.56	\$ 7.06	\$ 11.51	\$ 10.48	\$ 9.62	\$ 8.89	\$ 8.26	\$ 7.72	\$ 12.50	\$ 11.38	\$ 10.44	\$ 9.65	\$ 8.97	\$ 8.38
Amount Remaining for Fixed Costs/cwt			\$ (0.81)	\$ 0.13	\$ 0.92	\$ 1.59	\$ 2.16	\$ 2.66	\$ (1.80)	\$ (0.76)	\$ 0.10	\$ 0.83	\$ 1.46	\$ 2.00	\$ (2.78)	\$ (1.66)	\$ (0.73)	\$ 0.07	\$ 0.75	\$ 1.34
EBITDA			\$ (399)	\$ (137)	\$ 82	\$ 267	\$ 426	\$ 565	\$ (672)	\$ (386)	\$ (147)	\$ 56	\$ 230	\$ 382	\$ (945)	\$ (634)	\$ (375)	\$ (155)	\$ 35	\$ 199
Milk Price \$/cwt	\$	15.50	\$ 15.50	\$ 15.50	\$ 15.50	\$ 15.50	\$ 15.50	\$ 15.50	\$ 15.50	\$ 15.50	\$ 15.50	\$ 15.50	\$ 15.50	\$ 15.50	\$ 15.50	\$ 15.50	\$ 15.50	\$ 15.50	\$ 15.50	\$ 15.50
Avg Feed Cost/Cow/Day			\$ 5.35	\$ 5.35	\$ 5.35	\$ 5.35	\$ 5.35	\$ 5.35	\$ 5.85	\$ 5.85	\$ 5.85	\$ 5.85	\$ 5.85	\$ 5.85	\$ 6.35	\$ 6.35	\$ 6.35	\$ 6.35	\$ 6.35	\$ 6.35
Feed Cost/cwt			\$ 10.53	\$ 9.59	\$ 8.80	\$ 8.13	\$ 7.56	\$ 7.06	\$ 11.51	\$ 10.48	\$ 9.62	\$ 8.89	\$ 8.26	\$ 7.72	\$ 12.50	\$ 11.38	\$ 10.44	\$ 9.65	\$ 8.97	\$ 8.38
Amount Remaining for Fixed Costs/cwt			\$ 0.19	\$ 1.13	\$ 1.92	\$ 2.59	\$ 3.16	\$ 3.66	\$ (0.80)	\$ 0.24	\$ 1.10	\$ 1.83	\$ 2.46	\$ 3.00	\$ (1.78)	\$ (0.66)	\$ 0.27	\$ 1.07	\$ 1.75	\$ 2.34
EBITDA			\$ (121)	\$ 140	\$ 359	\$ 545	\$ 704	\$ 842	\$ (394)	\$ (108)	\$ 131	\$ 334	\$ 508	\$ 659	\$ (668)	\$ (357)	\$ (97)	\$ 123	\$ 312	\$ 476
Milk Price \$/cwt	\$	16.50	\$ 16.50	\$ 16.50	\$ 16.50	\$ 16.50	\$ 16.50	\$ 16.50	\$ 16.50	\$ 16.50	\$ 16.50	\$ 16.50	\$ 16.50	\$ 16.50	\$ 16.50	\$ 16.50	\$ 16.50	\$ 16.50	\$ 16.50	\$ 16.50
Avg Feed Cost/Cow/Day			\$ 5.35	\$ 5.35	\$ 5.35	\$ 5.35	\$ 5.35	\$ 5.35	\$ 5.85	\$ 5.85	\$ 5.85	\$ 5.85	\$ 5.85	\$ 5.85	\$ 6.35	\$ 6.35	\$ 6.35	\$ 6.35	\$ 6.35	\$ 6.35
Feed Cost/cwt			\$ 10.53	\$ 9.59	\$ 8.80	\$ 8.13	\$ 7.56	\$ 7.06	\$ 11.51	\$ 10.48	\$ 9.62	\$ 8.89	\$ 8.26	\$ 7.72	\$ 12.50	\$ 11.38	\$ 10.44	\$ 9.65	\$ 8.97	\$ 8.38
Amount Remaining for Fixed Costs/cwt			\$ 1.19	\$ 2.13	\$ 2.92	\$ 3.59	\$ 4.16	\$ 4.66	\$ 0.20	\$ 1.24	\$ 2.10	\$ 2.83	\$ 3.46	\$ 4.00	\$ (0.78)	\$ 0.34	\$ 1.27	\$ 2.07	\$ 2.75	\$ 3.34
EBITDA			\$ 156	\$ 418	\$ 637	\$ 822	\$ 982	\$ 1,120	\$ (117)	\$ 169	\$ 409	\$ 611	\$ 786	\$ 937	\$ (390)	\$ (79)	\$ 180	\$ 400	\$ 590	\$ 754
Milk Price \$/cwt	\$	17.50	\$ 17.50	\$ 17.50	\$ 17.50	\$ 17.50	\$ 17.50	\$ 17.50	\$ 17.50	\$ 17.50	\$ 17.50	\$ 17.50	\$ 17.50	\$ 17.50	\$ 17.50	\$ 17.50	\$ 17.50	\$ 17.50	\$ 17.50	\$ 17.50
Avg Feed Cost/Cow/Day			\$ 5.35	\$ 5.35	\$ 5.35	\$ 5.35	\$ 5.35	\$ 5.35	\$ 5.85	\$ 5.85	\$ 5.85	\$ 5.85	\$ 5.85	\$ 5.85	\$ 6.35	\$ 6.35	\$ 6.35	\$ 6.35	\$ 6.35	\$ 6.35
Feed Cost/cwt			\$ 10.53	\$ 9.59	\$ 8.80	\$ 8.13	\$ 7.56	\$ 7.06	\$ 11.51	\$ 10.48	\$ 9.62	\$ 8.89	\$ 8.26	\$ 7.72	\$ 12.50	\$ 11.38	\$ 10.44	\$ 9.65	\$ 8.97	\$ 8.38
Amount Remaining for Fixed Costs/cwt			\$ 2.19	\$ 3.13	\$ 3.92	\$ 4.59	\$ 5.16	\$ 5.66	\$ 1.20	\$ 2.24	\$ 3.10	\$ 3.83	\$ 4.46	\$ 5.00	\$ 0.22	\$ 1.34	\$ 2.27	\$ 3.07	\$ 3.75	\$ 4.34
EBITDA			\$ 434	\$ 695	\$ 914	\$ 1,100	\$ 1,259	\$ 1,397	\$ 161	\$ 447	\$ 686	\$ 889	\$ 1,063	\$ 1,214	\$ (113)	\$ 198	\$ 458	\$ 678	\$ 867	\$ 1,031
Milk Price \$/cwt	\$	18.50	\$ 18.50	\$ 18.50	\$ 18.50	\$ 18.50	\$ 18.50	\$ 18.50	\$ 18.50	\$ 18.50	\$ 18.50	\$ 18.50	\$ 18.50	\$ 18.50	\$ 18.50	\$ 18.50	\$ 18.50	\$ 18.50	\$ 18.50	\$ 18.50
Avg Feed Cost/Cow/Day			\$ 5.35	\$ 5.35	\$ 5.35	\$ 5.35	\$ 5.35	\$ 5.35	\$ 5.85	\$ 5.85	\$ 5.85	\$ 5.85	\$ 5.85	\$ 5.85	\$ 6.35	\$ 6.35	\$ 6.35	\$ 6.35	\$ 6.35	\$ 6.35
Feed Cost/cwt			\$ 10.53	\$ 9.59	\$ 8.80	\$ 8.13	\$ 7.56	\$ 7.06	\$ 11.51	\$ 10.48	\$ 9.62	\$ 8.89	\$ 8.26	\$ 7.72	\$ 12.50	\$ 11.38	\$ 10.44	\$ 9.65	\$ 8.97	\$ 8.38
Amount Remaining for Fixed Costs/cwt			\$ 3.19	\$ 4.13	\$ 4.92	\$ 5.59	\$ 6.16	\$ 6.66	\$ 2.20	\$ 3.24	\$ 4.10	\$ 4.83	\$ 5.46	\$ 6.00	\$ 1.22	\$ 2.34	\$ 3.27	\$ 4.07	\$ 4.75	\$ 5.34
EBITDA			\$ 711	\$ 973	\$ 1,192	\$ 1,377	\$ 1,537	\$ 1,675	\$ 438	\$ 724	\$ 964	\$ 1,166	\$ 1,341	\$ 1,492	\$ 165	\$ 476	\$ 735	\$ 956	\$ 1,145	\$ 1,309



\$ 16.50

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## 4. Financial & Operating Performance Review

To develop the output on the previous page, a substantial amount of financial and operating performance data must be gathered and analyzed. Typically financial performance by cost line item would be assessed over a 2-3 year period, and assumptions would be developed related to future performance.

Table 4.3 summarizes the data which must be analyzed and shows how the detailed information is converted to usable DPM data. For example, other variable costs include repairs and maintenance, utilities and a variety of other expense. After a line item review of these expenses, the variable costs per cwt may be estimated to arrive at the input summary show in the table.

Table 4.3

Dairy Performance Matrix® - Inputs	
Pounds of Milk/yr	27,753,888
Avg Lactating Cows	995
Avg Dry Cows	256
Total Herd	1,250
Avg Daily Production/Lactating Cow (lbs)	76.44
Avg Daily Production/Herd (lbs)	60.81
Avg Revenue per Cow	\$ 3,662
Avg Milk Price/cwt	16.50
Avg Labor/cwt	2.51
Avg Other VC/cwt	2.27
Avg Other FC/cwt	0.63
Feed/Cow/Day	5.85
Debt per Cow	2.479
Total Debt	3,100,000
Interest Rate	5.50%

### Dairy Performance Example

The enlarged segment of the DPM below depicts data from an actual dairy under today's market conditions with the price of milk at \$16.50/cwt, feed cost at \$5.85/cow/day and average production of 61 pounds of milk per cow per day. Under these conditions, the dairy's EBITDA is positive.

Table 4.4

Dairy Performance Matrix		Feed Cost/Cow/Day = \$5.35												Feed Cost/Cow/Day = \$5.85				Feed Cost/Cow/Day = \$6.35			
Beginning Milk Price		\$ 10.00																			
Beginning Milk Herd Lbs/Day		50,81																			
Avg Labor/cwt		\$ 2.51																			
Avg Other Variable Costs/cwt		\$ 2.27																			
Avg Other Fixed Costs/cwt		\$ 0.63																			
Addtl \$/cwt needed for VC		\$(2.10)																			
Addtl \$/cwt needed for VC & FC		\$(1.47)																			
		Cash Available for Fixed Costs																			
		Cash Not Available for Fixed Costs																			
		Positive EBITDA																			
		Negative EBITDA																			
Avg Milk Production/Cow/Day (lbs)		51	56	61	66	71	76	51	56	61	66	71	76	51	56	61	66	71	76		
Break Even Milk Price - EBITDA Only		\$ 15.94	\$ 14.99	\$ 14.21	\$ 13.54	\$ 12.96	\$ 12.47	\$ 16.92	\$ 15.89	\$ 15.03	\$ 14.30	\$ 13.67	\$ 13.12	\$ 17.91	\$ 16.79	\$ 15.85	\$ 15.06	\$ 14.38	\$ 13.78		
Milk Price \$/cwt	\$ 14.50	\$ 14.50	\$ 14.50	\$ 14.50	\$ 14.50	\$ 14.50	\$ 14.50	\$ 14.50	\$ 14.50	\$ 14.50	\$ 14.50	\$ 14.50	\$ 14.50	\$ 14.50	\$ 14.50	\$ 14.50	\$ 14.50	\$ 14.50			
Avg Feed Cost/Cow/Day	\$ 5.35	\$ 5.35	\$ 5.35	\$ 5.35	\$ 5.35	\$ 5.35	\$ 5.85	\$ 5.85	\$ 5.85	\$ 5.85	\$ 5.85	\$ 5.85	\$ 6.35	\$ 6.35	\$ 6.35	\$ 6.35	\$ 6.35	\$ 6.35			
Feed Cost/cwt	\$ 10.53	\$ 9.59	\$ 8.80	\$ 8.13	\$ 7.56	\$ 7.06	\$ 11.51	\$ 10.48	\$ 9.62	\$ 8.89	\$ 8.26	\$ 7.72	\$ 12.50	\$ 11.38	\$ 10.44	\$ 9.65	\$ 8.97	\$ 8.38			
Amount Remaining for Fixed Costs/cwt	\$ (0.81)	\$ 0.13	\$ 0.92	\$ 1.39	\$ 2.16	\$ 2.66	\$ (1.80)	\$ (0.76)	\$ 0.10	\$ 0.83	\$ 1.46	\$ 2.00	\$ (2.78)	\$ (1.66)	\$ (0.73)	\$ 0.07	\$ 0.75	\$ 1.34			
EBITDA	\$ (999)	\$ (137)	\$ 82	\$ 267	\$ 426	\$ 565	\$ (672)	\$ (386)	\$ (147)	\$ 56	\$ 230	\$ 382	\$ (945)	\$ (634)	\$ (375)	\$ (155)	\$ 35	\$ 199			
Milk Price \$/cwt	\$ 15.50	\$ 15.50	\$ 15.50	\$ 15.50	\$ 15.50	\$ 15.50	\$ 15.50	\$ 15.50	\$ 15.50	\$ 15.50	\$ 15.50	\$ 15.50	\$ 15.50	\$ 15.50	\$ 15.50	\$ 15.50	\$ 15.50	\$ 15.50			
Avg Feed Cost/Cow/Day	\$ 5.35	\$ 5.35	\$ 5.35	\$ 5.35	\$ 5.35	\$ 5.35	\$ 5.85	\$ 5.85	\$ 5.85	\$ 5.85	\$ 5.85	\$ 5.85	\$ 6.35	\$ 6.35	\$ 6.35	\$ 6.35	\$ 6.35	\$ 6.35			
Feed Cost/cwt	\$ 10.53	\$ 9.59	\$ 8.80	\$ 8.13	\$ 7.56	\$ 7.06	\$ 11.51	\$ 10.48	\$ 9.62	\$ 8.89	\$ 8.26	\$ 7.72	\$ 12.50	\$ 11.38	\$ 10.44	\$ 9.65	\$ 8.97	\$ 8.38			
Amount Remaining for Fixed Costs/cwt	\$ 0.19	\$ 1.13	\$ 1.92	\$ 2.59	\$ 3.16	\$ 3.66	\$ (0.80)	\$ 0.24	\$ 1.10	\$ 1.83	\$ 2.46	\$ 3.00	\$ (1.78)	\$ (0.66)	\$ 0.27	\$ 1.07	\$ 1.75	\$ 2.34			
EBITDA	\$ (121)	\$ 140	\$ 359	\$ 545	\$ 704	\$ 842	\$ (384)	\$ (108)	\$ 131	\$ 334	\$ 508	\$ 659	\$ (668)	\$ (357)	\$ (97)	\$ 123	\$ 312	\$ 476			
Milk Price \$/cwt	\$ 16.50	\$ 16.50	\$ 16.50	\$ 16.50	\$ 16.50	\$ 16.50	\$ 16.50	\$ 16.50	\$ 16.50	\$ 16.50	\$ 16.50	\$ 16.50	\$ 16.50	\$ 16.50	\$ 16.50	\$ 16.50	\$ 16.50	\$ 16.50			
Avg Feed Cost/Cow/Day	\$ 5.35	\$ 5.35	\$ 5.35	\$ 5.35	\$ 5.35	\$ 5.35	\$ 5.85	\$ 5.85	\$ 5.85	\$ 5.85	\$ 5.85	\$ 5.85	\$ 6.35	\$ 6.35	\$ 6.35	\$ 6.35	\$ 6.35	\$ 6.35			
Feed Cost/cwt	\$ 10.53	\$ 9.59	\$ 8.80	\$ 8.13	\$ 7.56	\$ 7.06	\$ 11.51	\$ 10.48	\$ 9.62	\$ 8.89	\$ 8.26	\$ 7.72	\$ 12.50	\$ 11.38	\$ 10.44	\$ 9.65	\$ 8.97	\$ 8.38			
Amount Remaining for Fixed Costs/cwt	\$ 1.19	\$ 2.13	\$ 2.92	\$ 3.59	\$ 4.16	\$ 4.66	\$ 0.20	\$ 1.24	\$ 2.10	\$ 2.83	\$ 3.46	\$ 4.00	\$ (0.78)	\$ 0.34	\$ 1.27	\$ 2.07	\$ 2.75	\$ 3.34			
EBITDA	\$ 156	\$ 418	\$ 637	\$ 822	\$ 982	\$ 1,120	\$ (117)	\$ 169	\$ 409	\$ 611	\$ 786	\$ 937	\$ (390)	\$ (79)	\$ 180	\$ 400	\$ 590	\$ 754			
Milk Price \$/cwt	\$ 17.50	\$ 17.50	\$ 17.50	\$ 17.50	\$ 17.50	\$ 17.50	\$ 17.50	\$ 17.50	\$ 17.50	\$ 17.50	\$ 17.50	\$ 17.50	\$ 17.50	\$ 17.50	\$ 17.50	\$ 17.50	\$ 17.50	\$ 17.50			
Avg Feed Cost/Cow/Day	\$ 5.35	\$ 5.35	\$ 5.35	\$ 5.35	\$ 5.35	\$ 5.35	\$ 5.85	\$ 5.85	\$ 5.85	\$ 5.85	\$ 5.85	\$ 5.85	\$ 6.35	\$ 6.35	\$ 6.35	\$ 6.35	\$ 6.35	\$ 6.35			
Feed Cost/cwt	\$ 10.53	\$ 9.59	\$ 8.80	\$ 8.13	\$ 7.56	\$ 7.06	\$ 11.51	\$ 10.48	\$ 9.62	\$ 8.89	\$ 8.26	\$ 7.72	\$ 12.50	\$ 11.38	\$ 10.44	\$ 9.65	\$ 8.97	\$ 8.38			
Amount Remaining for Fixed Costs/cwt	\$ 2.19	\$ 3.13	\$ 3.92	\$ 4.59	\$ 5.16	\$ 5.66	\$ 1.20	\$ 2.24	\$ 3.10	\$ 3.83	\$ 4.46	\$ 5.00	\$ 0.22	\$ 1.34	\$ 2.27	\$ 3.07	\$ 3.75	\$ 4.34			
EBITDA	\$ 434	\$ 695	\$ 914	\$ 1,100	\$ 1,259	\$ 1,397	\$ 161	\$ 447	\$ 686	\$ 889	\$ 1,063	\$ 1,214	\$ (113)	\$ 198	\$ 458	\$ 678	\$ 867	\$ 1,031			

## 4. Financial & Operating Performance Review

### Dairy Performance Example (Cont'd)

Beginning with the DPM on the previous page, minor changes in market conditions could turn positive cash flow into negative cash flow.

A \$0.50 increase in feed cost combined with a \$1.00 drop in milk prices and a 5 lb./day loss in production suddenly results in the inability to meet obligations from operational cash flow.

Given the volatility of the US milk market, this combination of movements is not unrealistic.

Table 4.5

#### Dairy Performance Matrix

Beginning Milk Price	\$	10.00																								
Beginning Milk Herd Lbs/Day		50,81																								
Avg Labor/cwt	\$	2.51																								
Avg Other Variable Costs/cwt	\$	2.27																								
Avg Other Fixed Costs/cwt	\$	0.63																								
Addtl \$/cwt needed for VC	\$	(2.10)																								
Addtl \$/cwt needed for VC & FC	\$	(1.47)																								
			Feed Cost/Cow/Day = \$5.35						Feed Cost/Cow/Day = \$5.85						Feed Cost/Cow/Day = \$6.35											
Avg Milk Production/Cow/Day (lbs)			51	56	61	66	71	76	51	56	61	66	71	76	51	56	61	66	71	76						
Break Even Milk Price - EBITDA Only			\$ 15.94	\$ 14.99	\$ 14.21	\$ 13.54	\$ 12.96	\$ 12.47	\$ 16.92	\$ 15.89	\$ 15.03	\$ 14.30	\$ 13.67	\$ 13.12	\$ 17.91	\$ 16.79	\$ 15.85	\$ 15.06	\$ 14.38	\$ 13.78						
Milk Price \$/cwt	\$	14.50	\$ 14.50	\$ 14.50	\$ 14.50	\$ 14.50	\$ 14.50	\$ 14.50	\$ 14.50	\$ 14.50	\$ 14.50	\$ 14.50	\$ 14.50	\$ 14.50	\$ 14.50	\$ 14.50	\$ 14.50	\$ 14.50	\$ 14.50							
Avg Feed Cost/Cow/Day	\$	5.35	\$ 5.35	\$ 5.35	\$ 5.35	\$ 5.35	\$ 5.35	\$ 5.85	\$ 5.85	\$ 5.85	\$ 5.85	\$ 5.85	\$ 5.85	\$ 6.35	\$ 6.35	\$ 6.35	\$ 6.35	\$ 6.35	\$ 6.35							
Feed Cost/cwt	\$	10.53	\$ 9.59	\$ 8.80	\$ 8.13	\$ 7.56	\$ 7.06	\$ 11.51	\$ 10.48	\$ 9.62	\$ 8.89	\$ 8.26	\$ 7.72	\$ 12.50	\$ 11.38	\$ 10.44	\$ 9.65	\$ 8.97	\$ 8.38							
Amount Remaining for Fixed Costs/cwt	\$	(0.81)	\$ 0.13	\$ 0.92	\$ 1.59	\$ 2.16	\$ 2.66	\$ (1.80)	\$ (0.76)	\$ 0.10	\$ 0.83	\$ 1.46	\$ 2.00	\$ (2.78)	\$ (1.66)	\$ (0.73)	\$ 0.07	\$ 0.75	\$ 1.34							
EBITDA	\$	(399)	\$ (137)	\$ 82	\$ 267	\$ 426	\$ 565	\$ (672)	\$ (386)	\$ (147)	\$ 56	\$ 230	\$ 382	\$ (945)	\$ (628)	\$ (375)	\$ (155)	\$ 35	\$ 199							
Milk Price \$/cwt	\$	15.50	\$ 15.50	\$ 15.50	\$ 15.50	\$ 15.50	\$ 15.50	\$ 15.50	\$ 15.50	\$ 15.50	\$ 15.50	\$ 15.50	\$ 15.50	\$ 15.50	\$ 15.50	\$ 15.50	\$ 15.50	\$ 15.50	\$ 15.50							
Avg Feed Cost/Cow/Day	\$	5.35	\$ 5.35	\$ 5.35	\$ 5.35	\$ 5.35	\$ 5.35	\$ 5.85	\$ 5.85	\$ 5.85	\$ 5.85	\$ 5.85	\$ 5.85	\$ 6.35	\$ 6.35	\$ 6.35	\$ 6.35	\$ 6.35	\$ 6.35							
Feed Cost/cwt	\$	10.53	\$ 9.59	\$ 8.80	\$ 8.13	\$ 7.56	\$ 7.06	\$ 11.51	\$ 10.48	\$ 9.62	\$ 8.89	\$ 8.26	\$ 7.72	\$ 12.50	\$ 11.38	\$ 10.44	\$ 9.65	\$ 8.97	\$ 8.38							
Amount Remaining for Fixed Costs/cwt	\$	0.19	\$ 1.13	\$ 1.92	\$ 2.59	\$ 3.16	\$ 3.66	\$ (0.80)	\$ 0.24	\$ 1.10	\$ 1.83	\$ 2.46	\$ 2.80	\$ (1.78)	\$ (0.66)	\$ 0.27	\$ 1.07	\$ 1.75	\$ 2.34							
EBITDA	\$	(121)	\$ 140	\$ 359	\$ 545	\$ 704	\$ 842	\$ (394)	\$ (108)	\$ 151	\$ 334	\$ 498	\$ 659	\$ (277)	\$ (357)	\$ (97)	\$ 123	\$ 312	\$ 476							
Milk Price \$/cwt	\$	16.50	\$ 16.50	\$ 16.50	\$ 16.50	\$ 16.50	\$ 16.50	\$ 16.50	\$ 16.50	\$ 16.50	\$ 16.50	\$ 16.50	\$ 16.50	\$ 16.50	\$ 16.50	\$ 16.50	\$ 16.50	\$ 16.50	\$ 16.50							
Avg Feed Cost/Cow/Day	\$	5.35	\$ 5.35	\$ 5.35	\$ 5.35	\$ 5.35	\$ 5.35	\$ 5.85	\$ 5.85	\$ 5.85	\$ 5.85	\$ 5.85	\$ 5.85	\$ 6.35	\$ 6.35	\$ 6.35	\$ 6.35	\$ 6.35	\$ 6.35							
Feed Cost/cwt	\$	10.53	\$ 9.59	\$ 8.80	\$ 8.13	\$ 7.56	\$ 7.06	\$ 11.51	\$ 10.48	\$ 9.62	\$ 8.89	\$ 8.26	\$ 7.72	\$ 12.50	\$ 11.38	\$ 10.44	\$ 9.65	\$ 8.97	\$ 8.38							
Amount Remaining for Fixed Costs/cwt	\$	1.19	\$ 2.13	\$ 2.92	\$ 3.59	\$ 4.16	\$ 4.66	\$ 0.20	\$ 1.24	\$ 2.10	\$ 2.83	\$ 3.46	\$ 4.00	\$ (0.78)	\$ 0.34	\$ 1.27	\$ 2.07	\$ 2.75	\$ 3.34							
EBITDA	\$	156	\$ 418	\$ 637	\$ 822	\$ 982	\$ 1,120	\$ (117)	\$ 169	\$ 409	\$ 611	\$ 786	\$ 937	\$ (390)	\$ (79)	\$ 180	\$ 400	\$ 590	\$ 754							
Milk Price \$/cwt	\$	17.50	\$ 17.50	\$ 17.50	\$ 17.50	\$ 17.50	\$ 17.50	\$ 17.50	\$ 17.50	\$ 17.50	\$ 17.50	\$ 17.50	\$ 17.50	\$ 17.50	\$ 17.50	\$ 17.50	\$ 17.50	\$ 17.50	\$ 17.50							
Avg Feed Cost/Cow/Day	\$	5.35	\$ 5.35	\$ 5.35	\$ 5.35	\$ 5.35	\$ 5.35	\$ 5.85	\$ 5.85	\$ 5.85	\$ 5.85	\$ 5.85	\$ 5.85	\$ 6.35	\$ 6.35	\$ 6.35	\$ 6.35	\$ 6.35	\$ 6.35							
Feed Cost/cwt	\$	10.53	\$ 9.59	\$ 8.80	\$ 8.13	\$ 7.56	\$ 7.06	\$ 11.51	\$ 10.48	\$ 9.62	\$ 8.89	\$ 8.26	\$ 7.72	\$ 12.50	\$ 11.38	\$ 10.44	\$ 9.65	\$ 8.97	\$ 8.38							
Amount Remaining for Fixed Costs/cwt	\$	2.19	\$ 3.13	\$ 3.92	\$ 4.59	\$ 5.16	\$ 5.66	\$ 1.20	\$ 2.24	\$ 3.10	\$ 3.83	\$ 4.46	\$ 5.00	\$ 0.22	\$ 1.34	\$ 2.27	\$ 3.07	\$ 3.75	\$ 4.34							
EBITDA	\$	434	\$ 695	\$ 914	\$ 1,100	\$ 1,259	\$ 1,397	\$ 161	\$ 447	\$ 686	\$ 889	\$ 1,063	\$ 1,214	\$ (113)	\$ 198	\$ 458	\$ 678	\$ 867	\$ 1,031							

## 4. Financial & Operating Performance Review

### Break Even Cash Flow

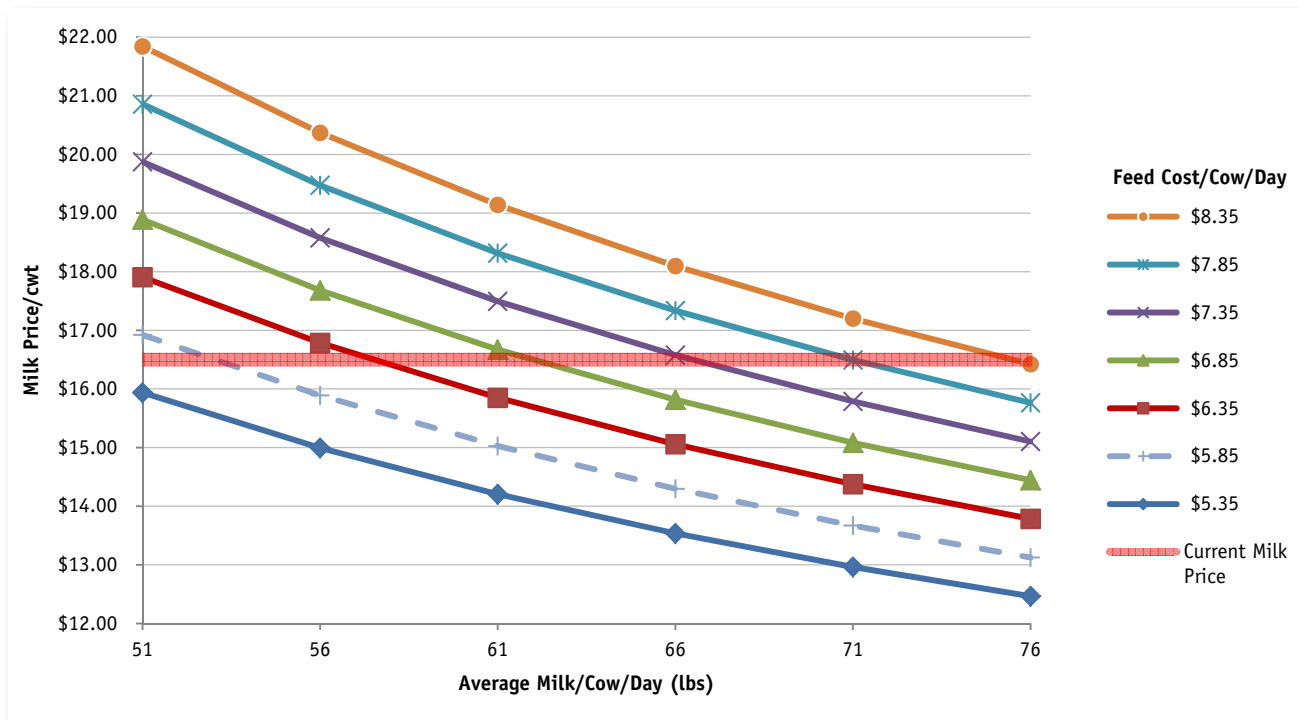
Upon completion of the Dairy Performance Matrix® as discussed on the preceding pages, the dairy farmer and their stakeholders will be able to assess the range of opportunities for break even cash flow.

Chart 4.6 graphically represents the combinations of feed costs per cow per day and production per cow per day that result in a break even cash flow before debt service. Data points below the current milk price have positive cash flow while those above the current milk price have a negative cash flow.

The dairy in this example has a feed cost/cow/day of \$5.85 (dashed blue line). Given the milk price of \$16.50/cwt, this dairy will experience negative cash flow at 51 lb/cow/day of milk production. However, at increased production levels, the dairy is able to achieve positive cash flow.

Each line in the chart represents a different feed cost, allowing the dairy to easily identify its break even point should feed costs change.

Chart 4.6: Milk Price and Feed Cost Combinations of EBITDA Break Even



## 4. Financial & Operating Performance Review

### Financial Leverage

The next step in the analysis is to consider the financial leverage of the enterprise and the farmer's ability to service varying levels of debt. In this section, consideration will be given to total debt, asset classifications and useful lives of assets.

An additional tool within the Dairy Performance Matrix®, the Supportable Debt Optimizer, provides a method for summarizing debt and assets by asset class.

Once the information is summarized, alternatives for differing debt amortization periods, principal balances, and interest rates are used to develop a restructuring plan consistent with the EBITDA generated by the dairy operation.

Based on the useful life of particular debt classes the total debt per class and proposed interest rates, the table below identifies viable combinations of debt service given available cash flow. Blue cells indicate viable repayment terms by debt class assuming the full amount of EBITDA would be available for that debt class. Gray cells indicate monthly payments that exceed available cash flow or amortization periods that exceed the useful life of the asset.

Table 4.7 begins to develop the understanding of the dairy farm operation's leverage. In the example below, if all cash generated could be used by one asset class, there are some possible repayment terms.

Table 4.7

Debt Class	Useful Life (Months)	Proposed Int Rate	Original Debt Amount	Debt Forgiven	Debt Amt. Financed	Client EBITDA (\$000)/Yr			
Real Estate	240.0	5.0%	2,000,000	-	2,000,000	\$ 409			
M&E	60.0	5.0%	300,000	-	300,000	Client EBITDA (\$000)/Mo			
Livestock	60.0	5.0%	800,000	-	800,000	\$ 34.0			
<b>Avg/Total</b>	<b>116.3</b>	<b>5.0%</b>	<b>3,100,000</b>	<b>-</b>	<b>3,100,000</b>				
<b>Term (mos)</b>									
			<b>12</b>	<b>24</b>	<b>36</b>	<b>60</b>	<b>120</b>	<b>180</b>	<b>240</b>
<b>Real Estate</b>	Debt (\$000)	\$	2,000.0	\$ 2,000.0	\$ 2,000.0	\$ 2,000.0	\$ 2,000.0	\$ 2,000.0	\$ 2,000.0
	PMT (\$000)	\$	171.2	\$ 87.7	\$ 59.9	\$ 37.7	\$ 21.2	\$ 15.8	\$ 13.2
<b>Mechinery &amp; Equip.</b>	Debt (\$000)	\$	300.0	\$ 300.0	\$ 300.0	\$ 300.0	\$ 300.0	\$ 300.0	\$ 300.0
	PMT (\$000)	\$	25.7	\$ 13.2	\$ 9.0	\$ 5.7	\$ 3.2	\$ 2.4	\$ 2.0
<b>Livestock</b>	Debt (\$000)	\$	800.0	\$ 800.0	\$ 800.0	\$ 800.0	\$ 800.0	\$ 800.0	\$ 800.0
	PMT (\$000)	\$	68.5	\$ 35.1	\$ 24.0	\$ 15.1	\$ 8.5	\$ 6.3	\$ 5.3
Available EBITDA/mo	\$	34.0	<b>Optimal Available Payments</b>						
Real Estate	\$	(13.2)	\$ 171.2	\$ 87.7	\$ 59.9	\$ 37.7	\$ 21.2	\$ 15.8	\$ 13.2
Mechinery & Equip.	\$	(5.7)	\$ 25.7	\$ 13.2	\$ 9.0	\$ 5.7	\$ 3.2	\$ 2.4	\$ 2.0
Livestock	\$	(15.1)	\$ 68.5	\$ 35.1	\$ 24.0	\$ 15.1	\$ 8.5	\$ 6.3	\$ 5.3
Total Payment	\$	(34.0)							
Cash After Debt Srvc	\$	0.08							

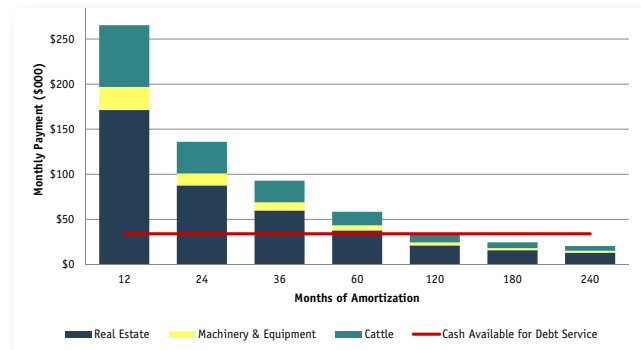
## 4. Financial & Operating Performance Review

### Financial Leverage (Cont'd)

Chart 4.8 considers the total level of farm debt, in this case \$3.1 million, and assumes an amortization of all debt over the same term. The horizontal red line shows the monthly cash amount available for debt service while the vertical stacked bars represent the total monthly payments required based on the number of months over which the debt is amortized.

If all debt could be amortized over the same term, rather than over varying useful lives, the dairy would be able to repay all of its debt in 120 months. In the next charts, the impact of varying useful lives related to asset classes will be addressed.

Chart 4.8: Possible Amortization Combinations for Debt Service



Charts 4.9 and 4.10 implement an assumed useful life limitation of 60 months for both Machinery & Equipment and Livestock. With this limitation in place, it becomes more difficult for the dairy to service its debt with existing cash flow.

As shown in Chart 4.9, a lender could not expect a 10 year amortization of real estate, given the debt service requirements of Machinery & Equipment and Livestock. However, amortizing the Real Estate over 20 years would allow for repayment of all debt, albeit with no excess or cushion for pricing cycles.

Chart 4.9: Optimized Supportable Debt Service Real Estate Over 10 Years

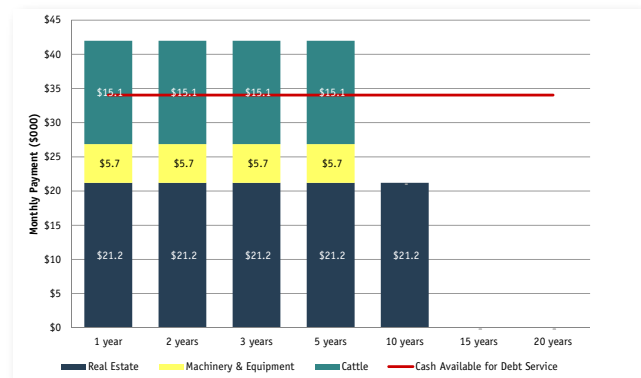
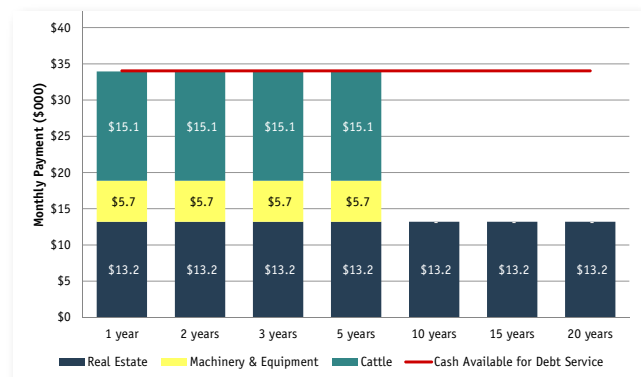


Chart 4.10: Optimized Supportable Debt Service Real Estate Over 20 Years



## 4. Financial & Operating Performance Review

### Financial Leverage (Cont'd)

Chart 4.11 continues with the previous example with the exception that the dairy has only \$25,000 per month to service debt (rather than the \$34,000 per month in the previous example), indicating that even when amortizing over the maximum useful lives of the lender's secured assets, cash flow is insufficient to service debt.

A situation such as this would require the consideration of structured forbearance, debt forgiveness liquidation, capital infusion or other method of debt structure, to bring the EBITDA performance, the assets and the loans together.

Chart 4.11: Optimized Supportable Debt Service Real Estate Over 20 Years



Using Chart 4.11 above, Table 5.12 below shows a sample of a reduction in principal which would match the available EBITDA cash flow of \$25,000 per month. A total of \$675,000 has been written off across the three debt classes to achieve a debt service payment of \$24,900 per month. There are multiple

combinations of restructuring strategies that could bring the debt service within the EBITDA performance. This offers one example, and provides a tool to test various alternatives during a negotiation process.

Table 4.12

Debt Class	Useful Life (Months)	Proposed Int Rate	Original Debt Amount	Debt Forgiven	Debt Amt. Financed	Client EBITDA (\$000)/Yr
Real Estate	240.0	5.0%	2,000,000	300,000	1,700,000	\$ 301
M&E	60.0	5.0%	300,000	75,000	225,000	
Livestock	60.0	5.0%	800,000	300,000	500,000	\$ 25.0
<b>Avg/Total</b>	<b>116.3</b>	<b>5.0%</b>	<b>3,100,000</b>	<b>675,000</b>	<b>2,425,000</b>	

		Term (mos)						
		12	24	36	60	120	180	240
<b>Real Estate</b>	Debt (\$000)	\$ 1,700.0	\$ 1,700.0	\$ 1,700.0	\$ 1,700.0	\$ 1,700.0	\$ 1,700.0	\$ 1,700.0
	PMT (\$000)	\$ 145.5	\$ 74.6	\$ 51.0	\$ 32.1	\$ 18.0	\$ 13.4	\$ 11.2
<b>Mechinery &amp; Equip.</b>	Debt (\$000)	\$ 225.0	\$ 225.0	\$ 225.0	\$ 225.0	\$ 225.0	\$ 225.0	\$ 225.0
	PMT (\$000)	\$ 19.3	\$ 9.9	\$ 6.7	\$ 4.2	\$ 2.4	\$ 1.8	\$ 1.5
<b>Livestock</b>	Debt (\$000)	\$ 500.0	\$ 500.0	\$ 500.0	\$ 500.0	\$ 500.0	\$ 500.0	\$ 500.0
	PMT (\$000)	\$ 42.8	\$ 21.9	\$ 15.0	\$ 9.4	\$ 5.3	\$ 4.0	\$ 3.3
Available EBITDA/mo	\$ 25.0							
Real Estate	\$ (11.2)	\$ 145.5	\$ 74.6	\$ 51.0	\$ 32.1	\$ 18.0	\$ 13.4	\$ 11.2
Mechinery & Equip.	\$ (4.2)	\$ 19.3	\$ 9.9	\$ 6.7	\$ 4.2	\$ 2.4	\$ 1.8	\$ 1.5
Livestock	\$ (9.4)	\$ 42.8	\$ 21.9	\$ 15.0	\$ 9.4	\$ 5.3	\$ 4.0	\$ 3.3
<b>Total Payment</b>	<b>\$ (24.9)</b>							
Cash After Debt Srv	\$ 0.1							

## 4. Financial & Operating Performance Review

### Overall Performance Analysis

Using the information developed in the Dairy Performance Matrix, including the Supportable Debt Optimizer, the dairy farmer and their stakeholders should assess opportunities for success and begin to develop next steps.

The use of these tools provides all parties with an understanding of the dairy farm's potential to generate positive EBITDA, and then, the level of debt the dairy farm could support.

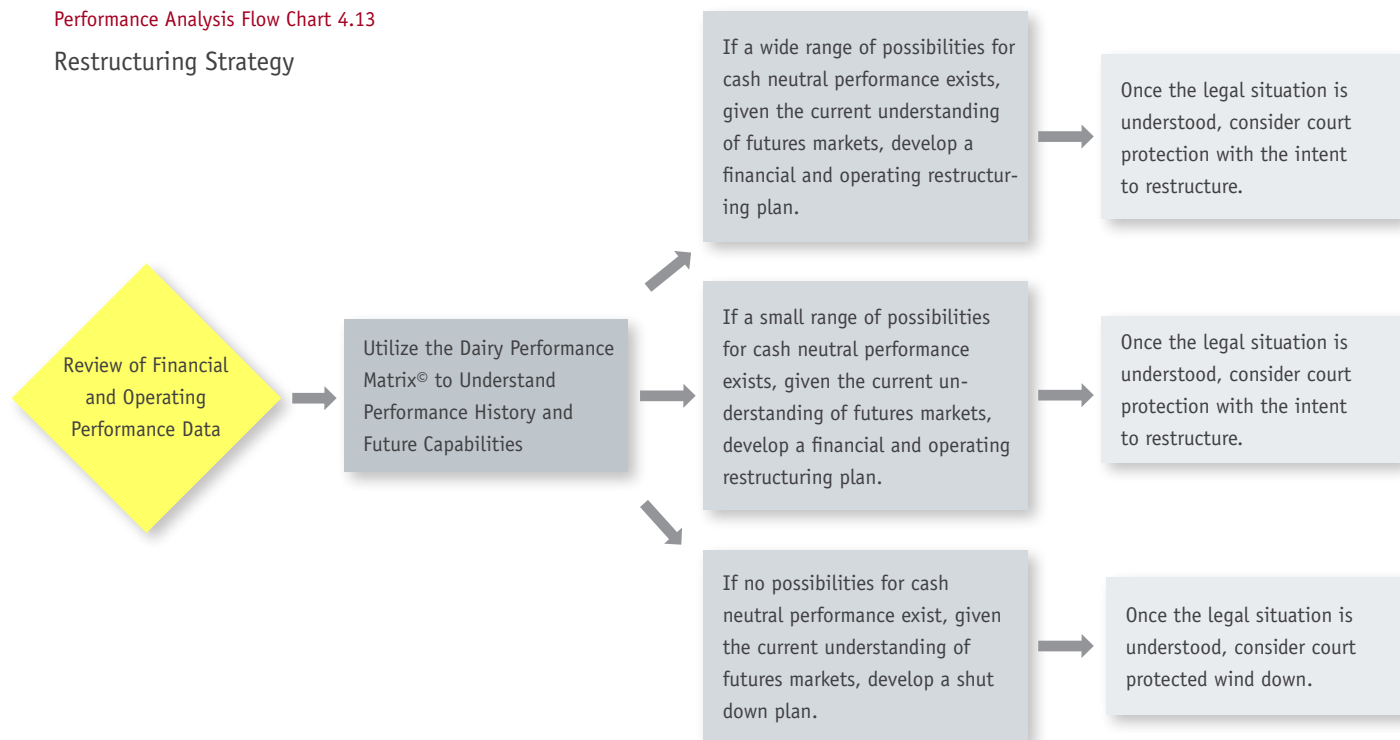
The Performance Analysis Flow Chart 4.13 below summarizes the decision making process the Dairy Performance Matrix®, with

the Supportable Debt Optimizer, will allow to be used. The chart illustrates how to understand the number of opportunities of milk price combinations, feed costs per cow per day, and production per cow per day that result in break even or better cash flow.

That information is coupled with the analysis of the financial leverage of the operation to find a combination of operating performance and financial leverage which will work for the stakeholders of the dairy operation.

### Performance Analysis Flow Chart 4.13

#### Restructuring Strategy



## Summary of the Dairy Farmer Performance Analysis

1. The performance of the dairy farmer is a combination of macroeconomic issues driving milk prices and overall feed costs, and the microeconomic issues surrounding operating and financial leverage of the dairy farm operation.
2. The dairy farm is a complex financial operation which requires a thorough understanding of performance opportunities to achieve a leverage structure which works under varying milk price and feed cost alternatives.



## 5. Restructuring Considerations & Alternatives



## 5. Restructuring Considerations & Alternatives

In the previous sections of this Paper, we have developed an understanding of the micro and macroeconomic issues affecting a dairy farm operator, and we have analyzed the operator's opportunities for break even or better performance.

Given that analysis, the focus will now shift to the unique aspects of a dairy farm restructure. As with any restructure, a thorough understanding of the debt structure, banking relationships, and legal agreements will need to occur.

In addition, information specific to the ability to convert assets to cash must be developed.

- One of the largest asset categories of a dairy farm is real estate. The purpose of this Paper is not to address those issues related to real estate values; however, it should be noted that many of the herd size increases and related equipment expansions during the period of high milk prices were funded by, what is now, inflated real estate values.
- The dairy herd is a unique asset for consideration during restructuring efforts. The need to maintain herd health, feed, and milk the asset creates additional difficulties not found in a typical restructuring case. These difficulties include retaining personnel, having access to funding for feed and herd health, and the ability to convert the asset to cash via sale over some period of time.

To accomplish a thorough restructuring review, additional data is required. This section will outline of what specific information is necessary to collect and provide an understanding of its necessity.

### Strategy Overview

While the financial and operating performance data is being developed, a listing of contact information for individuals and entities that will either be critical to gathering data or critical to the implementation of a restructuring plan should be developed.

This should include:

- Listings of cattle sales operations or auction barns.
- Listings of feed brokers and feed suppliers.
- Listings of equipment sales operations.
- Alternative milk purchasing operations.
- Names and contact information for accountants (internal and external).
- Names and contact information for key employees.
- Names and contact information for current veterinary vendors, and alternative local providers.

Chart 5.1 on the following page outlines the decision making process that will need to be employed with the dairy farm owner, the financial advisors, and legal counsel. This information will be critical when analyzing alternatives.

One of the first decisions in a restructuring effort will be whether to continue to operate all of the dairy locations and whether to continue to feed all of the cattle. Chart 5.2 on the next page provides an overall decision making outline for these questions.

If a restructuring plan should be implemented, based on the findings of the financial and operating performance review, the restructuring plan should include the following considerations:

- Certain dairy operations may need to be closed immediately, cattle shipped and assets secured.
- Certain dairy operations may continue to operate, with wind down decisions made in the future.
- The heifer and calf herd must be analyzed for feeding strategy based on age, weight, breed and sex.
- Certain animals may be shipped out quickly.
- Other animals could either be fed out on site or shipped to cattle feed lots. (A summary of an analysis tool for this decision is included in this Paper.)



## 5. Restructuring Considerations & Alternatives

Chart 5.1

### Restructuring Strategy Information Needs

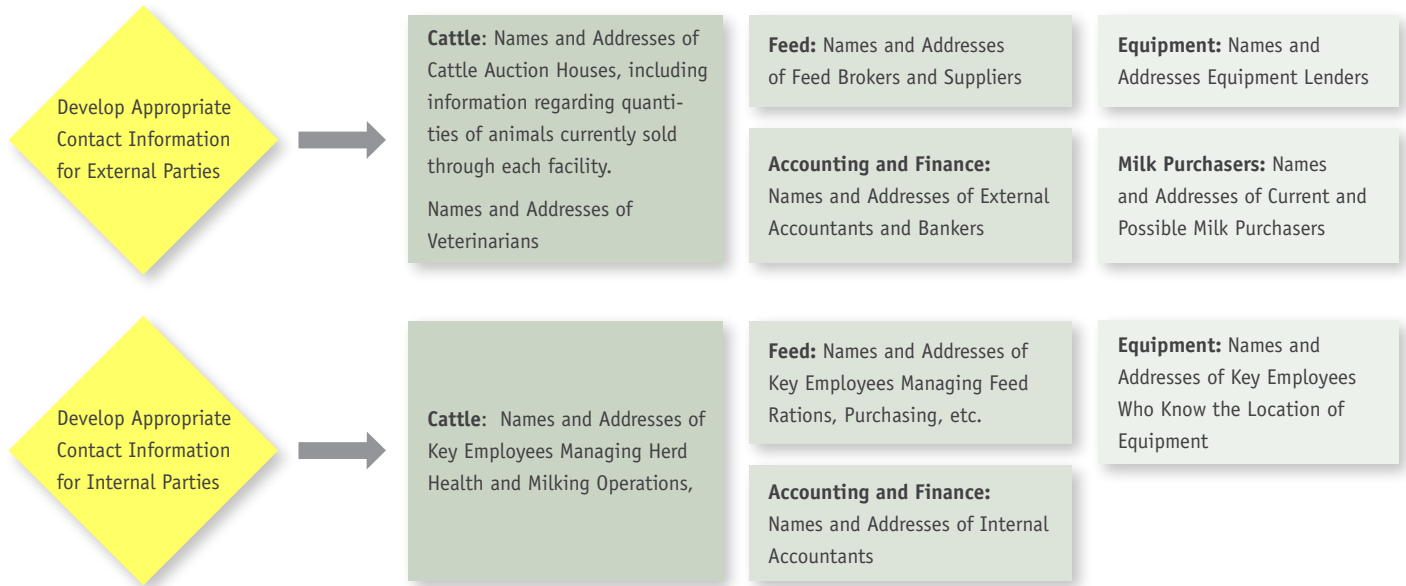
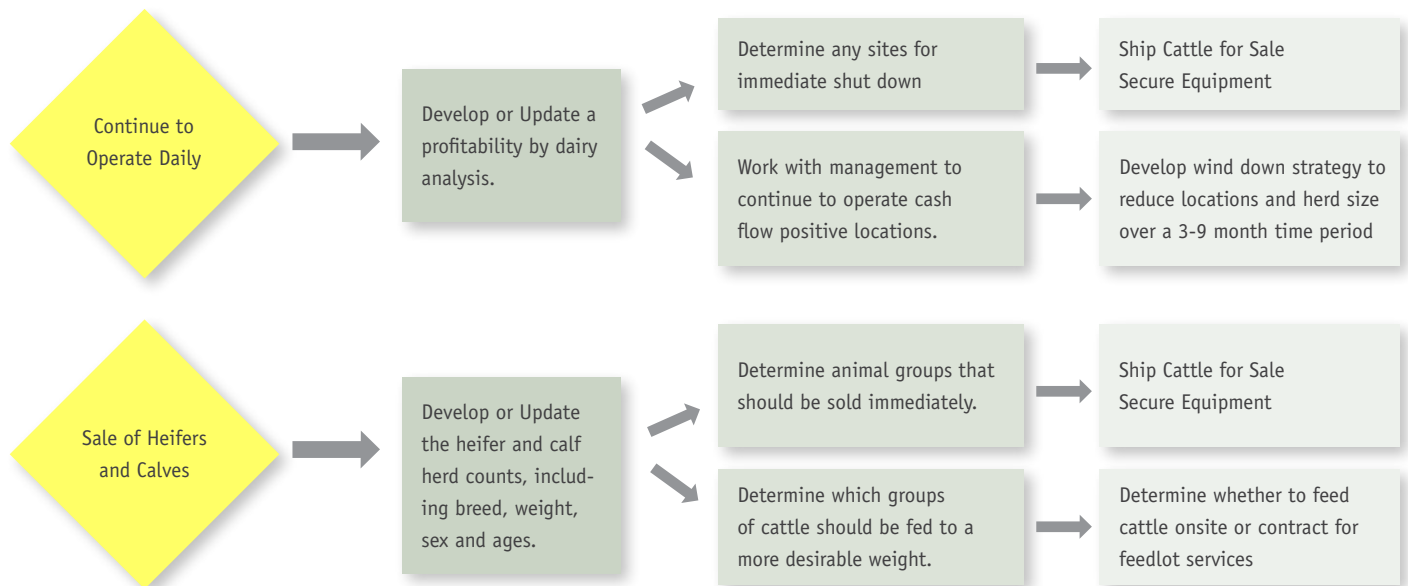


Chart 5.2

### Asset Recovery General Strategy Overview





## 5. Restructuring Considerations & Alternatives

### Asset Value Information

Information will be required to analyze collateral values and asset sale options for various asset groups. The table below summarizes critical data by asset category.

Table 5.3

Herd	Feed	Equipment & Vehicles
Detailed herd count, including age, weight, breed, sex, lactation schedule, etc.	Verify location, type, age, quality and security of feed included in inventory.	Verify location, age, condition and ownership status (owned/leased) of all equipment.
Understanding of local market limitations on cattle absorption, location of auction sites, feed lots, etc.	Identify avenues to either acquire or liquidate feed holdings, including market absorption and seasonality issues.	Identify venues for conversion to cash.

### Asset Location Analysis Overview

#### Asset and Location Summary

Table 5.4 below provides an example of the asset analysis of a multi-location farming operation. Assets have been categorized by location with both the book value and fair market values identified.

Table 5.4: Summary of Collateral by Entity

	Herd			Equipment & Vehicles		Real Estate		Feed Inventory		Totals	
	Count (A)	NBV (B)	FMV (A)	NBV (B)	FMV (B)	NBV (B)	FMV (B)	NBV (C)	FMV (A)	NBV	FMV
Client Location 1	25,143	24,012,393	27,371,810	3,466,580	3,466,580	7,700,000	5,000,000	3,206,295	3,186,643	38,385,268	39,025,033
Client Location 2	1,879	1,794,507	2,045,565	4,468,358	4,468,358	5,800,000	3,750,000	3,115,800	3,120,843	15,178,665	13,384,766
Client Location 3	2,100	2,219,283	2,101,775	313,947	313,947	750,000	500,000	248,847	384,085	3,532,077	3,299,807
<b>TOTAL</b>	<b>29,122</b>	<b>28,026,183</b>	<b>31,519,150</b>	<b>8,248,885</b>	<b>8,248,885</b>	<b>14,250,000</b>	<b>9,250,000</b>	<b>6,570,942</b>	<b>6,691,571</b>	<b>57,096,010</b>	<b>55,709,606</b>

(A) – Per Borrowing Base Certificate  
 (B) – Per General Ledger  
 (C) – Per Feed Management System



## 5. Restructuring Considerations & Alternatives

### Asset Sale Information

Table 5.5 provides an example of a dairy operation's sales to local cattle entities. The table highlights the historic volumes of cows introduced into a local market.

In 2009, the sample entity introduced 24,451 head into the local market for sale, indicating average sales of 2,038 cows per month. At this rate, 14.3 months would be needed to liquidate the full herd of 29,122 cows. Total market size must be identified to determine the total number of slaughter cows the market could absorb before oversupply affects the herd value.

**Table 5.5: Client Cattle Sales**

2009 Absorption – Local Markets

Name	Documented Herd Sold	Total Sale	Avg \$/Head
Auction Site #1	3,090	\$ 1,419,149	\$ 459.27
Auction Site #2	1,584	761,687	\$ 480.86
Auction Site #3	876	614,252	\$ 701.20
Auction Site #4	3,080	510,865	\$ 165.87
Auction Site #5	569	297,614	\$ 523.05
Other	1,517	787,435	\$ 519.07
Grand Total	10,716	\$ 4,391,003	\$ 409.76
Herd Sold at Unknown Location(s)	13,735	\$ 183,812	\$ 13.38
Total 2009 Absorption into Market	24,451	\$ 4,574,815	
Absorption by Month	2,038		
Total Client Herd 2010	29,122		
Months to Liquidate at Current Rate	14.3		

Tables 5.6a and 5.6b are output from a financial analysis tool which assists in the determination of whether it is more cost effective to feed cattle on site or to ship the cattle to a feed lot. Determining factors include: Days to Feed; Miles Shipped (cattle and feed); Shipping Costs; and Feeder Charge.

In the 90-day feeding example below, an owner with salaried employees would be indifferent between the two alternatives at a shipping distance of 90 miles. A distance of less than 90 miles would indicate having feed shipped in whereas a shipping distance of greater than 90 miles would indicate shipping the cattle to a feeder lot.

Based on this herd sale data, a combination of immediate sale of some quantity of dairy cattle, coupled with a wind down of other operations over 10 to 16 months, and eventual sale of remaining assets, could be developed.

Any restructuring plan should be continuously analyzed in conjunction with milk prices and feed costs to determine if the restructuring plan requires adjustment.

The heifer and calf herd will need to be analyzed for:

- Sale of springing heifers to other dairy operations or through sales venues.
- Cattle to be fed to traditional beef weights consistent with the overall asset recovery time frame strategy.

**Table 5.6a: Feed Shipped to Cattle**

Days to Feed	90	
Herd Size	5,000	
Total Feed Cost/Cow		\$ 215
Total Feed Cost/Herd		\$ 1,074,170
Feed Freight Charge per Loaded Mile		\$ 2.90
Miles Shipped	90	
Total Feed Freight Cost		\$ 261
Feed Tons per Load		22.00
Tons Required per Cow		2.250
Feed Freight Cost per Cow		\$ 26.69
Feed Freight Cost per Herd		\$ 133,466
<hr/>		
<b>TOTAL FEEDING COST PER COW</b>		<b>\$ 242</b>
<b>TOTAL FEEDING COST PER HERD SIZE OF 5000 for 90 DAYS</b>		<b>\$ 1,207,636</b>

**Table 5.6b: Cattle Shipped to Feed Lot**

Days to Feed	90	
Herd Size	5,000	
Total Feed Cost/Cow		\$ 215
Total Feed Cost/Herd		\$ 1,074,170
Cattle Freight Charge per Loaded Mile		\$ 3.25
Miles Shipped	90	
Total Cattle Freight Cost		\$ 293
Cattle per Load		40
One Way Shipping Cost per Cow		\$ 7.31
One Way Shipping Cost per Herd		\$ 36,563
Feeder Charge/Head/Day		\$ 0.22
Feeder Charge per Cow		\$ 19.80
Feeder Charge per Herd		\$ 99,000
<hr/>		
<b>TOTAL FEEDING COST PER COW</b>		<b>\$ 242</b>
<b>TOTAL FEEDING COST PER HERD SIZE OF 5000 for 90 DAYS</b>		<b>\$ 1,209,733</b>



## 5. Restructuring Considerations & Alternatives

At this point, the parties considering restructure should have:

- An understanding of the macroeconomic futures outlook for milk and feed.
- An understanding of the financial performance of the unique dairy farm operator.
- An understanding of the opportunities and issues affecting the ability to maintain or sell the collateral.
- An understanding of the legal situation being confronted.

The combination of the information gathered to this point will be important to the next steps in the restructuring effort, which begins with consideration of both out of court and court protected restructuring efforts.

Before any type of restructuring is implemented, key considerations must be made to ensure the dairy will continue to operate effectively, without loss of product (milk) or collateral (cows) until the ultimate restructuring strategy is determined.

### Restructuring Considerations

- **Critical Employee Retention:** Dealing with livestock requires uninterrupted attention and manpower, especially with lactating cows that must be milked multiple times per day.
- **Important Vendors:** Relations must be maintained with feed suppliers, utilities, veterinary services, trucking, etc. If these vendors have large outstanding balances, special terms/payments may be needed for continued service. Alternative vendors should be sourced for critical supplies to ship milk to produce cash flow and ensure the ability to continue to ship milk products to the purchaser and maintain the health of the herd.
- **Location of Inventory, Machinery, Sensitive Documents, etc.:** With large dairy operations, vehicles and other equipment may be scattered across multiple sites or in unknown locations (lent to neighbors, stored off site, etc.). These items should be located before the release of employees with critical knowledge.
- **Security:** Resources may need to be in place to protect assets from creditors, or others, who may act to attempt to

recover operating assets of the enterprise.

- **Herd Sales:** Local market supply/demand and timing constraints must be understood to quantify the impact on a resizing of the operations, or a liquidation of all or part of the assets.

A short term and long term cash flow must be developed. The short term cash flow should consider a minimum of thirteen weeks, while the long term cash flow should consider operations through at least a thirteen month period (to capture feed cycles and herd production cycles). The data accumulated during the information gathering phase that resulted in the Dairy Performance Matrix<sup>®</sup> output will provide a significant portion of the information needed to develop the cash flows.

### Unique Cash Flow Issues

**Receivables:** For a dairy operations, receivables are milk check receivables from the dairies that purchase the producer's milk. Typically dairies pay either once (around the 20th) or twice per month (once around the 1st and then around the 20th). If the twice per month election is made, the first milk check receipts in a month are often referred to as a guess check, with a trueing up of receipts occurring with the second check.

In both payment approaches, milk shipped during one month is paid in the subsequent month and outstanding receivables could range from a full month of production to 1.6 months of production.

- Milk prices are based on a base price determined by the market, with quality, butter fat and protein incentives.
- It will be important to receive the detailed accounting from the milk purchaser which accompanies the milk check to determine what, if any, automatic deductions are being made. Types of automatic deductions could be bank loan payments, supplier payments, trucking charges, etc.

**Banking:** The depository and lending relationships with banks must be understood.

- Lenders often have agreements with the dairy producer and the milk buyer to remit directly from the buyer to the lender. Any of these agreements must be understood.



## 5. Restructuring Considerations & Alternatives

**Herd Health:** To maintain the herd and its health, it is important to:

- Assess the feed inventory levels and the monthly feed supply needs.
- Assess the herd health records and regular veterinary needs—maintenance and emergency needs.
- Assess the herd production reports and other automated herd related information.

**Analysis of Contracts:** To assist in determining restructuring strategies, it will be necessary to gather all contracts and review them from the perspective of need after restructuring. Particular emphasis should be placed on:

- Any hedging contracts, both for milk and for feed. Focus has encountered a variety of hedging strategies ranging from locking in a portion of the overall performance via input and output hedging matches, to attempting to out guess the market.
- Contracts with the dairies to provide certain levels of milk. There are a variety of contracts milk purchasers use with their producers. The specifics of the agreement must be understood.
- Contracts for trucking services. Depending on the size of the dairy farm, there may be in-house trucking operations or out-sourced trucking operations. Often times, the milk purchaser provides the trucking services and charges the dairy farmer via milk check deductions and pays the trucker directly.

At the current time, Focus would recommend each dairy farmer assess their feed supply and their feed costs, and forecast their income statement performance based on these new futures prices and the relationship between milk prices and feed costs in the futures market. While this analysis may show a troubled situation, it may not spell disaster for a dairy farmer.

Lenders continue to suffer from the real estate loans made during the real estate bubble period (including those real estate loans made to expand dairy operations during the high milk price period of 2007 and 2008). Many lenders are willing to

work with borrowers to avoid having to take significant loan write offs.

Lenders who provided operating capital and worked with their dairy farm clients to survive the milk price/feed cost relationship in 2009 may continue to be willing to work with borrowers to stave off loan write offs.

As a result, once a dairy farmer has a clear understanding of their financial condition under the current futures pricing, it may be time for a dairy farmer to analyze alternatives.

### Out of Court Restructuring Efforts

**Direct Lender Negotiations:** Initially a dairy farmer and counsel may pursue direct lender negotiations in an attempt to reduce repayment requirements or provide additional operating capital. Understanding the DPM and leverage position provides the strong background needed to undertake these types of negotiations from a position of knowledge. For small farmers (generally defined as those family farm operations with less than \$3.5 million of debt), the ability to use the Chapter 12 bankruptcy rules may provide added strength to negotiations with lenders for out of court settlements.

**CRO:** A dairy farmer may offer to appoint a CRO in exchange for a restructuring of the debt. This could result in an interest only period of time, or the creation of “hope notes” for a portion of the principal. This alternative may be a way for a dairy farmer to continue to operate their farm, albeit with oversight from the CRO. Due to cost, the CRO concept may only work for dairies of a more substantial size than a 100 cow herd. The CRO approach may also work best when the dairy farmer and the lender believe there is a successful underlying operation to be saved.

### Court Protected Restructuring Efforts:

**Bankruptcy Reorganization (Chapters 11 or 12):** A reorganization would provide relief from current unsecured debt and could allow a forced interest only or no interest period (depending on the specific relationship between collateral and loan balance). If the farmer believes they are able to survive from a cash flow perspective paying current expenses with current milk income, without paying past due payables or bank debt, this may



## 5. Restructuring Considerations & Alternatives

be an option, with the ability to exit bankruptcy once the milk and feed prices are better aligned. For small farmers (generally defined as those family farm operations with less than \$3.5 million of debt), the ability to use the Chapter 12 bankruptcy rules provides specific guidelines for writing down debt and developing the plan of reorganization.

**Bankruptcy Protection (Chapter 7) and Receiverships:** In some cases, the dairy farmer and advisors may determine it is better to walk away from the operation. This may involve the appointment of a receiver or a bankruptcy trustee.

In either case, management responsibilities would transfer to a third party. That third party may, however, elect to hire the dairy farm owner for a period of time and provide a source of income while the dairy farmer transitions to a new career or retires.

### Court-Protected Restructuring Structures

As described in this section, there are a variety of potential restructuring strategies with a wide range of outcomes. Clearly the extent of the information that must be considered and analyzed is substantial. Focus always believes it is better to be as knowledgeable as possible about the current financial situation and seek legal guidance if the situation is weak.

If it is determined that court protected restructuring must be initiated, stakeholders will likely implement one or more of the following structures:

- Appointment of a Receiver
- Chapter 7 Liquidation
- Chapter 11 Reorganization
- Chapter 12 Reorganization

Because the “inventory” being addressed must be fed, milked and cared for on an uninterrupted basis, additional considerations must be in place before any court actions are initiated. Further, as the size of the operation increases, so does complexity of decision making. The following will address some of the nuances required for each restructuring option noted above.

### Court-Appointed Receivership

The appointment of a Receiver is either: 1) consensual and timely, or 2) nonconsensual and unpredictable. The appointment process also varies by state, with some Courts deferring to lender recommendations regarding who should be appointed as Receiver, while other Courts may appoint from a predetermined and approved list of individuals.

Because there should not be any lapse in care for the herd, the Receiver must have the ability to be on site immediately upon appointment to maintain order, secure the assets and to reassure the employees charged with caring for the herd.

Predetermined arrangements must be made for the Receiver to have immediate access to cash should he/she need to purchase feed or make payments to critical vendors. The Receiver should have a prefunded account containing 60 to 90 days of operating cash to address such needs. These funds should be independent of the dairy’s normal operating account to avoid the common (or unexpected) delays that may occur when assets are transferred to a Receiver.

The stakeholders and the Receiver must have agreed upon decision points based on time, account balances or available resources. As an example, if the dairy’s operating account drops below the sum of 60 days of feed cost plus 60 days of labor, herd liquidation must be initiated or additional funding must be received. Once the operating account has less than 30 days of feed and labor costs on-hand, the Receiver may need to initiate liquidation of the remaining assets.

The receiver must consider the information provided in Charts 5.1 and 5.2, which raise considerations related to labor, vendors, etc.

### Chapter 7 Liquidation

Upon the filing for Chapter 7 liquidation, a Trustee will be appointed to manage the assets of the dairy and to maintain the health of the herd. Similar to the preparation required for the appointment of a Receiver, lenders must be prepared to finance any shortfalls of the estate to ensure that the collateral will survive until it is liquidated.



## 5. Restructuring Considerations & Alternatives

Estate cash on hand, local market size, herd condition, economic conditions, etc. will determine the liquidation timeframe and thus the amount of short term financing that may be required to fully liquidate the assets of the dairy.

The trustee must also consider the information provided in Charts 5.1 and 5.2, which raise considerations related to labor, vendors, etc.

### Chapter 11 Reorganization

A Chapter 11 Reorganization should pose less operational disruption than either the appointment of a Receiver or a Chapter 7 Liquidation as existing management would likely remain in place. Assurances must still be made to have sufficient cash on hand to feed the herd and compensate employees. Assurances must also be made to the lender that the collateral will be maintained and assets will be used to maximize recovery.

It will be important for the dairy farmer to continue to receive 100% of sales proceeds directly from the milk purchaser. Milk sales proceeds going to the lender for later disbursement to the dairy could present unnecessary operational challenges if not handled appropriately to address the needs of the herd. At the same time, the lender must have confidence funds will be used appropriately to maximize recovery.

The Chapter 11 reorganization requires coordination and cooperation between the farmer, the lender and the trustee.

The operators and trustee must also consider the information provided in Charts 5.1 and 5.2 of this Paper, which raise considerations related to labor, vendors, etc.

### Chapter 12 Reorganization

A Chapter 12 Reorganization should pose less operational disruption than either the appointment of a Receiver or a Chapter 7 Liquidation as existing management would likely remain in place, however a Chapter 12 Trustee will be appointed to oversee the reorganization efforts.

This approach is similar to a CRO approach but with the specific protections offered to farm operations defined under statute as small (essentially family farms with less than \$3.5 million of debt). Assurances must still be made to have sufficient cash on hand to feed the herd and compensate employees.

It will be important for the dairy farmer to continue to receive 100% of sales proceeds directly from the milk purchaser. Milk sales proceeds going to the lender for later disbursement to the dairy could present unnecessary operational challenges if not handled appropriately to address the needs of the herd.

The operators and trustee must also consider the information provided in Charts 5.1 and 5.2 of this Paper, which raises considerations related to labor, vendors, etc.

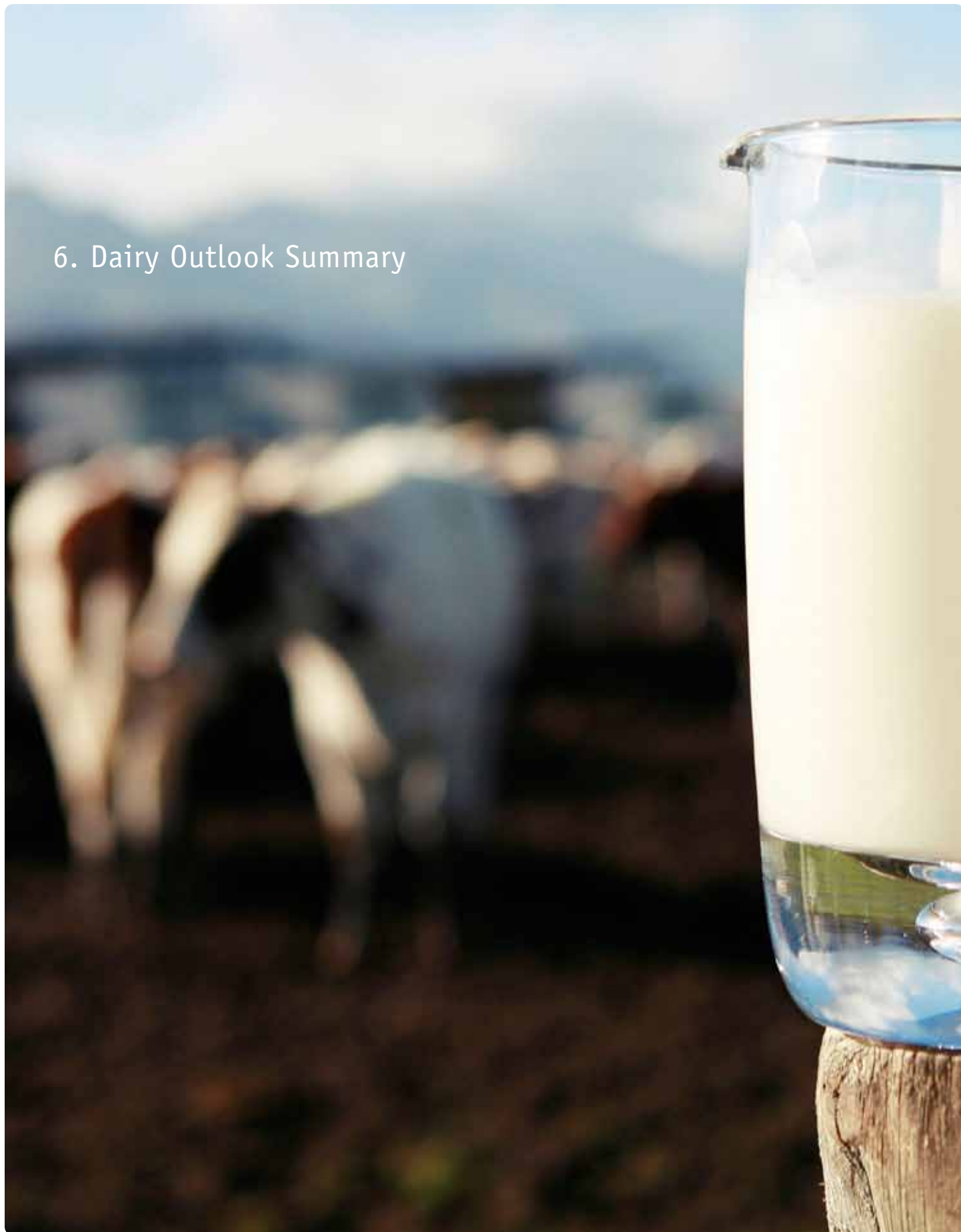
As with a Chapter 11 Reorganization, Chapter 12 requires coordination and cooperation between all parties. The lender may feel more at risk during a Chapter 12 proceeding.



## Summary of Restructuring Strategies

1. Once the financial performance and leverage positions are understood, and the necessary information to assess performance is gathered, the dairy farmer and advisors would be able to develop the restructuring strategy most beneficial under the specific circumstances.
2. Out of court restructuring efforts are typically explored first; however, the dairy farmer and the lenders need to understand the court protected options to arrive at the best alternatives to better negotiate with debtors and to better understand options.

## 6. Dairy Outlook Summary



## 6. Dairy Outlook Summary

In summary, when considering the restructuring opportunities for a dairy operation, there are both external and internal factors that will contribute to the enterprise's ability to succeed.

### External Factors

Indicators that bode well for the US dairy industry include:

- Low interest rates and a weak US dollar are keeping US products attractively priced, supporting dairy exports.
- Record 2011 corn crop should ease short term supply fears.
- Cull cattle prices are high due to strong demand and tightening supply of fed cattle.
- US milk production per cow continues to rise due to advances in technology/biology and the economies of scale generated from dairy consolidations.

Indicators that could hurt the US dairy industry include:

- Milk production in New Zealand and Australia has recovered from last year, adding to the world market supply.
- Even with a record 2011 corn harvest, US stockpiles of corn are near historic lows.
- Severe spring flooding and summer heat waves in 2011 may negatively impact 2012 crops.
- Ethanol manufacture continues to consume an ever greater percent of total corn production, limiting corn supply and driving feed prices higher.
- The weak US dollar continues to contribute to higher oil/fuel prices.

### Internal Factors

- As the largest single variable cost component in dairy operations, feed costs and the management of these costs is critical for survival of a dairy enterprise.
- Production per cow is a serious part of the micro economic decision matrix. While feed plays an important role in the production per cow, the impact of herd health is also critical. For example, ensuring annual vaccinations are occurring is often overlooked.
- Herd management also will play a critical role in profitability. This involves herd size, age composition, quality composition, culling, availability of replacements, etc.

- Hedging of the milk price component and/or the feed cost component may provide the opportunity to lock in a portion of the margins of an enterprise.

### Combining Internal and External factors

- The Focus Dairy Performance Matrix<sup>®</sup> provides a tool for the stakeholders of a dairy operation to consider the multiple combinations of price per cwt for milk, cost of feed, and production per cow that will result in break even or positive operations.
- Use of this tool, and its Supportable Debt Optimizer, also provides an opportunity to consider the ability to service existing levels of debt and consider appropriate balance sheet structures.
- Depending on the range of potential positive outcomes for a dairy operation, the dairy farm operator and their legal counsel or other stakeholders will be able to assess the probability of success of the operation.

### Additional Information

- In addition to the financial and operating analysis, data regarding the ability to convert assets to cash must be gathered to contribute to the analysis of the next steps.
- Dairy farms are unique in that animals need to be fed and milked to continue to maintain the collateral value of the operation. As a result, it is important to gather mission critical information on herd health, veterinary services, feed suppliers, feed inventory, and key employees.

### Next Steps

Assuming a thorough understanding of dairy farm operations have been developed and the information requirements have been gathered, it is critical that a full legal review of the bank relationships, collateral positions, etc. is completed.

Combining this data will result in the ability to decide if the dairy farm client will succeed without a restructure, versus an opportunity to fight for success via a court protected restructuring effort or an out of court restructure, versus a receivership or appointment of a trustee to facilitate a liquidation for the benefit of the creditors.

## 7. Dairy Market News Terminology

Source: University of Wisconsin *Dairy Marketing and Risk Management Program*



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Source: University of Wisconsin *Dairy Marketing and Risk Management Program*

Over the years, those engaged in the marketing of dairy products have developed a language peculiar to the trade. Numerous terms and phrases having special meanings are in frequent use. Market reports are intended to convey useful information to readers regarding important phases of a market situation and are best understood by the trade if words and expressions employed are in common usage. The following terms, definitions and abbreviations are used in describing dairy markets and market situations.

**AMS: Agricultural Marketing Service:** An agency of the US Department of Agriculture. This Agency's responsibilities include administering marketing order programs, standardization, inspection and grading, market news, and the research and promotion programs.

**COMPONENT PRICE AND PRODUCT PRICE FORMULAS:** Class Prices are derived from National Agricultural Statistic Service average monthly weighted prices of NDM, whey, butter, block, and barrel cheese. Replaced the Basic Formula Price (BFP) in January 2000.

**BULK BUTTER** - Packed 68 pounds or 25 KG, net weight, in corrugated boxes.

**BUTTERFAT / MILKFAT** - The fat portion of whole milk.

**CCC - Commodity Credit Corporation:** An agency of the US Department of Agriculture. This Agency's responsibilities include conducting price support purchases and related activities, involving expenditures of funds under powers granted by the Congress to CCC. The Secretary of Agriculture and other Department officials serve as officers of the Corporation.

**ADJUSTED PURCHASES** - Total purchases, contract basis, less/plus contract adjustments.

**FISCAL/MARKETING YEAR** - October 1 through September 30.

**MANUFACTURING ALLOWANCES** - CCC's estimate of the average amount per hundredweight needed by plants to cover manufacturing costs (fuel, labor, equipment, packaging, etc.) to convert whole milk into cheese or butter and nonfat dry milk. This allowance is used in determining the CCC purchase price which will enable manufacturers to return to the dairy farmers, on a national average basis, the Government support price. Manufacturing allowances are also used in the calculation of class prices.

**MILK EQUIVALENT** - The equivalent pounds of whole milk containing a specific percentage of milkfat--usually 3.67%--used in the production of manufactured dairy products. One method for computing milk equivalent is to multiply the volume of specific manufactured dairy products by a conversion factor derived from the yield of the product from a hundredweight of milk at the specified milkfat percent.

**FAT SOLIDS BASIS:** factors used: butter, 21.8; cheese, 9.23; and nonfat dry milk, 0.22.

**SKIM SOLIDS BASIS:** factors used: butter, 0.12; cheese, 9.90; and nonfat dry milk, 11.64.

**NET PURCHASES / REMOVALS** - referred to interchangeably as CCC, USDA, or Government removals or net purchases. Surplus milk bought by the CCC under the support price program in the form of butter, cheese, and nonfat dry milk, less cancellations and sales to the trade for unrestricted use.

**PURCHASE PRICES** - Announced prices that CCC pays under the price support program for butter, cheese and nonfat dry milk.

**REGIONS** - East, Central, and West. Consists of the following states:

**EAST** - Connecticut, Delaware, Florida, Georgia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, North Carolina, Pennsylvania,

Rhode Island, South Carolina, Vermont, Virginia, and West Virginia.

**CENTRAL** - Alabama, Arkansas, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Michigan, Minnesota, Mississippi, Missouri, Nebraska, North Dakota, Ohio, Oklahoma, South Dakota, Tennessee, Texas, and Wisconsin.

**WEST** - Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.

**SELLBACK PRICES** - The prices determined by CCC at which the government will sell dairy products back to the trade.

**RESTRICTED USE** - Sales of CCC commodities restricted to a specific use, such as animal feed.

**SUPPORT PRICE FOR MILK** - The price set by the Secretary of Agriculture (since October 21, 1981, the support price has been established by Congress) which is in compliance with the requirements of the Agricultural Act of 1949, as amended, for the milk price support program. The support price is a price goal - a national average price for milk of national average milkfat content that USDA hopes to see realized in the marketplace. CCC purchase prices are calculated to provide to milk processors who buy manufacturing grade milk, sufficient revenue to pay producers the support price. CCC does not guarantee that farmers will receive that price.

**UNCOMMITTED INVENTORIES** - Stocks held by CCC which have not been committed for sale or donation.

**CIF** - Cost, Insurance, and Freight.

**COLD STORAGE HOLDINGS** - Products normally held for 30 days or more in public, private, and semiprivate refrigerated storage facilities. Does not include products in wholesalers' and retailers' storage facilities, which are normally held less than 30 days.

**COMMERCIAL DISAPPEARANCE** - Commercial disappearance includes civilian and military purchases of milk and dairy products for domestic and foreign use, but excludes farm household use and USDA donations of dairy products. Disappearance is a residual figure and therefore can be affected by any inaccuracies in estimating milk production, on-farm use, stocks, and imports.

**COMMERCIAL STOCKS** - Total US stocks or holdings, minus Government-owned stocks or holdings.

**COMPONENT PRICE** - Value of milk's major components - butterfat, nonfat solids, or protein and other solids. Derived from the NASS price of the major dairy product made from the component - butter, NDM, block or barrel cheese and whey.

**CONTRACT SALES** - Contract sales (oral or written) include product that is earmarked for a regular established outlet. The contract may cover a specified period of time or volume. The price may be fixed or based on negotiated differentials over or under some base price or index.

**DAIRY MARKET NEWS** - DMN: A program administered by USDA, Agricultural Marketing Service, collects and provides timely and accurate information pertaining to supply and demand conditions for milk and dairy products. Provide the industry information to help make current buying and selling decisions and aid in future planning.

**DMN REGIONS:**

**DOMESTIC:**

**CENTRAL** - Arkansas, Illinois, Indiana, Iowa, Kansas, Louisiana, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, Oklahoma, South Dakota, Texas, and Wisconsin

**NORTHEAST** - Connecticut, Delaware, Maine, Maryland, Massachusetts, New

## 7. Dairy Market News Terminology

Source: University of Wisconsin *Dairy Marketing and Risk Management Program*

Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont  
SOUTHEAST - Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia

WEST - Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming

### INTERNATIONAL:

EASTERN EUROPE - Belarus, Bulgaria, Czechoslovakia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, and Ukraine

OCEANIA - Australia and New Zealand

WESTERN EUROPE (EU-15) - Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and United Kingdom

EU-25 - All EU 15 countries plus Poland, Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Malta, Slovakia and Slovenia.

DEIP - Dairy Export Incentive Program: A program administered by USDA, Foreign Agricultural Service, which helps exporters of US dairy products compete on the world market.

DELIVERED EQUIVALENT - Prices are derived by using an f.o.b. price, plus an adjustment to reflect the cost of transporting the product to a specified area.

DELIVERED PRICE - f.o.b. price plus transportation and handling.

DEMAND - The desire to possess a commodity, coupled with the willingness and ability to pay. VERY GOOD - Offerings or supplies are rapidly being absorbed

GOOD - Firm confidence on the part of buyers that general market conditions are good. Trading is more active than normal.

MODERATE - Average buyer interest and trading.

LIGHT - Demand is below average.

VERY LIGHT - Few buyers are interested in trading.

ERS - Economic Research Service: An agency of the US Department of Agriculture. This Agency's responsibilities include providing economic research and forecasting.

EX DOCK - Often seen as "Ex Doc, Duty Paid." Imported product that has cleared customs and all paperwork has been completed. Product is available for pickup by the buyer.

EXCHANGE - An organization which establishes and enforces rules of trade in a market (cash markets). Terms used by DMN which are associated with Exchange trading.

BID - Refers to the price a buyer is willing to pay for a product. May raise the trading level. Indicated by the letter "B" at the CME.

CARLOAD - Chicago Mercantile Exchange - Cheese = 40,000 - 44,000 pounds

CARLOT - Chicago Mercantile Exchange - butter = 40,000 - 43,000 pounds  
NDM = 42,000 - 45,000 pounds

OFFER - Refers to the price an owner is willing to accept for a product. May lower the trading level. Also known as an "ask" in CME terminology, indicated by the letter "A" at the CME.

SALE - A bid filled or an offer covered.

FAS - Foreign Agricultural Service: An agency of the US Department of Agriculture. This Agency's responsibilities include providing foreign agricultural information, administering import regulations, and assisting in the export of US farm products.

FEDERAL MILK ORDERS - Federal Milk orders are authorized by the Agricultural Marketing Agreement Act of 1937. Under this law, the Secretary of Agriculture may establish Federal Orders that apply to buyers (handlers) of milk. Basically, a milk order

is a legal document issued to regulate the minimum prices paid to dairy farmers by handlers of Grade A milk in a specified marketing area. Milk under the Federal Milk order system is separated into four separate classes:

CLASS I - milk used for beverages including eggnog and ultra high temperature (UHT) milk.

CLASS II - milk used for soft products. This includes cottage cheese, ricotta cheese, pot cheese, Creole cheese, milk shake and ice milk mixes, frozen desserts, aerated cream, frozen cream, sour cream, half-n-half, yogurt, custards, puddings, pancake mixes, batter, buttermilk biscuit mixes, infant or dietary formulas packaged in hermetically sealed containers, candy, soup and bakery products for general distribution to the public including sweetened condensed milk used for manufacture of aforesaid products, and fluid cream or any product containing artificial fat or fat substitutes that resemble fluid cream.

CLASS III - milk used in the manufacture of cream cheese and other spreadable cheeses, and hard cheese of types that may be shredded, grated, or crumbled. It also includes plastic cream, anhydrous milkfat, and buttermilk.

CLASS IV - milk used to produce butter, any milk product in dry form and evaporated or sweetened condensed milk in a consumer-type package.

FDA - Food and Drug Administration: An agency of the US Department of Health and Human Services.

FLUID GRADE MILK (GRADE A) - Milk eligible for sale for use in fluid milk products. This milk must be produced under strict sanitary conditions which meet state and local standards. Fluid grade milk may be used to make manufactured dairy products.

F.O.B. - Free on Board: Seller places product sold in a railcar, truck, or other form of transportation. The buyer then assumes transportation costs.

FSA - Farm Service Agency (formerly ASCS): An agency of the US Department of Agriculture. This Agency's responsibilities include administering the dairy and other farm commodity price support programs.

FUTURES TERMS - several common terms used by traders in futures markets.

CHICAGO MERCANTILE EXCHANGE - CME

CFTC - The Commodity Futures Trading Commission as created by the Commodity Futures Trading Commission Act of 1974. This government agency currently regulates the nation's commodity futures industry.

CONTRACT - Unit of trading for a commodity future. Also, actual bilateral agreement between the parties (buyer and seller) of a futures or option on futures transaction as defined by an exchange.

CONTRACT MONTH - The month in which futures contracts may be satisfied by making or accepting delivery.

DELIVERY - The tender and receipt of an actual commodity or cash in settlement of a futures contract.

LONG - An investor expecting a futures price to increase may decide to go long or buy a futures contract.

SHORT - An investor expecting a futures price to decline may go short or sell a futures contract.

OPEN INTEREST - Total number of futures or options on futures contracts that have not yet been offset or fulfilled by delivery. An indicator of the depth or liquidity of a market (the ability to buy or sell at or near a given price) and of the use of a market for risk and/or asset-management.

## 7. Dairy Market News Terminology

Source: University of Wisconsin Dairy Marketing and Risk Management Program

**SETTLEMENT PRICE** - A figure determined by the closing range that is used to calculate gains and losses in futures market accounts. Settlement prices are used to determine gains, losses, margin calls, and invoice prices for deliveries.

**VOLUME** - The number of transactions in a futures or options on futures contract made during a specified period of time.

**LTL** - Less than truckload quantity.

**MANUFACTURING GRADE MILK (GRADE B)** - Milk eligible for sale for which use is limited to manufactured dairy products. This milk must be produced under conditions which meet state and local standards, but these standards are less stringent than those for fluid grade milk (Grade A).

**MARKET** - A term with several meanings:

- A. A geographic location where a commodity is traded.
- B. The price, or price level, at which a commodity is traded.
- C. To sell a commodity.

**MARKET ACTIVITY** - The rate at which sales are being made. Often stated as: active, moderate, slow, or inactive.

**MARKET CHANNELS:**

**BROKER/TRADER** - A middleman activity involved in facilitating sales between producers and other levels in the marketing chain. Typically does not take title to product.

**FOOD SERVICE** - A marketing channel which includes purchases of dairy products by hotels, restaurants, fast food outlets, schools, and institutions.

**INDUSTRIAL** - A marketing channel which includes dairy products purchased as an ingredient in the production of food and nonfood products.

**JOBBER** - A middleman activity in food distribution involving the transfer of products between wholesalers or manufacturers and end use outlets. Jobbing sales are usually on a small scale and jobbers provide special services to small food stores, restaurants, and institutions. Typically takes title to product.

**RETAIL** - A marketing channel which sells dairy products directly to the consumer for personal or household consumption.

**WHOLESALE** - A middle link in the food distribution chain. Wholesalers assemble relatively large quantities of product and resell in smaller lots to various users such as the food service trade, small retail food stores, and jobbers. Major functions may include assembling, grading warehousing, order taking, cutting, wrapping, printing, and delivery. Customer services such as merchandising aids and credit also may be provided.

**METRIC CONVERSIONS:**

KG / KILOGRAM = approximately 2.2 pounds

MT / METRIC TON = approximately 2,204.6 pounds

**MOSTLY** - The majority of sales within a reported price range. Transaction driven not volume weighted  
**NA** - Not available.

**NASS** - National Agricultural Statistics Service: An agency of the US Department of Agriculture. This Agency's responsibilities include providing official

USDA data and estimates of agricultural prices, dairy products, milk production, cold storage, and other items.

**NC** - No change.

**NDM** - Nonfat Dry Milk - See USDA standards.

**NOMINAL PRICES** - Prices that reflect buyers' and sellers' opinions of current values

(bids, offers, grade, and regional differentials, etc.) when there is limited trading of a commodity. Ordinarily, published prices are based on three or more separate, actual spot transactions. However, because of the practical uses made of pricing information by buyers and sellers, nominal prices are used to indicate where spot trades would occur. If a reporter is unable to gather enough information for nominal prices, then prices are reported as too few to report (TFEWR).

**PRICE TREND** - The direction in which prices are moving in relation to trading in the previous reporting period(s).

**HIGHER** - The majority of sales are at prices measurably higher than the previous trading session.

**FIRM** - Prices are tending higher, but not measurably so.

**STEADY** - Prices are unchanged from the previous trading session.

**WEAK** - Prices are tending lower, but not measurably so.

**LOWER** - Prices for most sales are measurably lower than the previous trading session.

**PRINT BUTTER** - Butter which is packaged in one-pound or smaller pieces.

**PRODUCT PRICE FORMULAS** - Used to compute minimum class prices under federal milk orders. Consist of product prices, make allowances, and yield factors. Product prices are those collected weekly by NASS for butter, NDM, block and barrel cheese and dry whey. Replaced BFP in January 2000.

**RAILCAR** = approximately 130,000 to 160,000 pounds

**RESALE PRICES** - Transactions that reflect product that has been purchased and resold (can be more than once). Trades can occur above, below, or at spot prices depending on current market conditions. These trades are not reported in spot price ranges but may be included in comments.

**SMP** - Skim Milk Powder

1. An international market term often used interchangeably for NDM.

2. A term used in the US for a dry product made from a blend of condensed skim and another condensed dairy product(s) generally for export sales. This product does not meet USDA standards for NDM.

**SOLIDS-NOT-FAT (SNF)** - The solids in milk other than milkfat. Also known as nonfat solids.

**SPOT PRICES** - The first sale, f.o.b. the producing plant, of product that has no regular or committed outlet and is sold on the open market for immediate delivery or delivery within a few days. Sales to CCC under the price support program are included with spot trades.

**SUPPLY/OFFERING** - The quantity of a particular item available for current sale.

**HEAVY** - When the volume of supplies is above average for the market.

**MODERATE** - When the volume of supplies is average for the market.

**LIGHT** - When the volume of supplies is below average for the market.

**TFEWR** - Too few to report - insufficient market information to determine a price.

**TL** - Truckload = approximately 40,000 - 44,000 pounds

**UNDERTONE/TONE** - Situation or sense of market direction.

**USPHS** - United States Public Health Service: An agency of the US Department of Health and Human Services. This agency's responsibilities include the promulgation and administration of Federal standards of identity (which define milk and dairy products) and administering the fluid Grade A milk program (which covers the sanitary aspects of milk and processing).

**WET SOLIDS** - another term for condensed skim.

## 8. About Focus Management Group



## 8. About Focus

### Company Background

Focus Management Group provides turn-key support to underperforming companies and their stakeholders.

We are a leader in the market for dairy companies facing turnaround or crisis situations. Our performance has earned us the highest levels of trust and respect when confronted with challenging circumstances.

### Overview

**Nationwide Presence:** Offices in Atlanta, Chicago, Cleveland, Dallas, Los Angeles, Philadelphia, and Tampa.

**Industry Expertise:** Specific expertise providing financial and operational guidance to clients with dairy and milk operations.

**Seasoned Professionals:** Proven team of 150 multi-disciplined professionals with an average of 25+ years of experience in Operations, Finance and Agriculture.

**Proven Experience:** Broad experience—over 2,000 engagements covering 500+ industries.

### Recognition

Named in the Beard Group's 2011, 2010, 2009 and 2008 list of "Outstanding Turnaround Firms" in Turnaround & Workouts.

Listed as one of the Top Ten Crisis Management Firms each quarter for the past four years in The Deal Magazine's Bankruptcy League Tables.

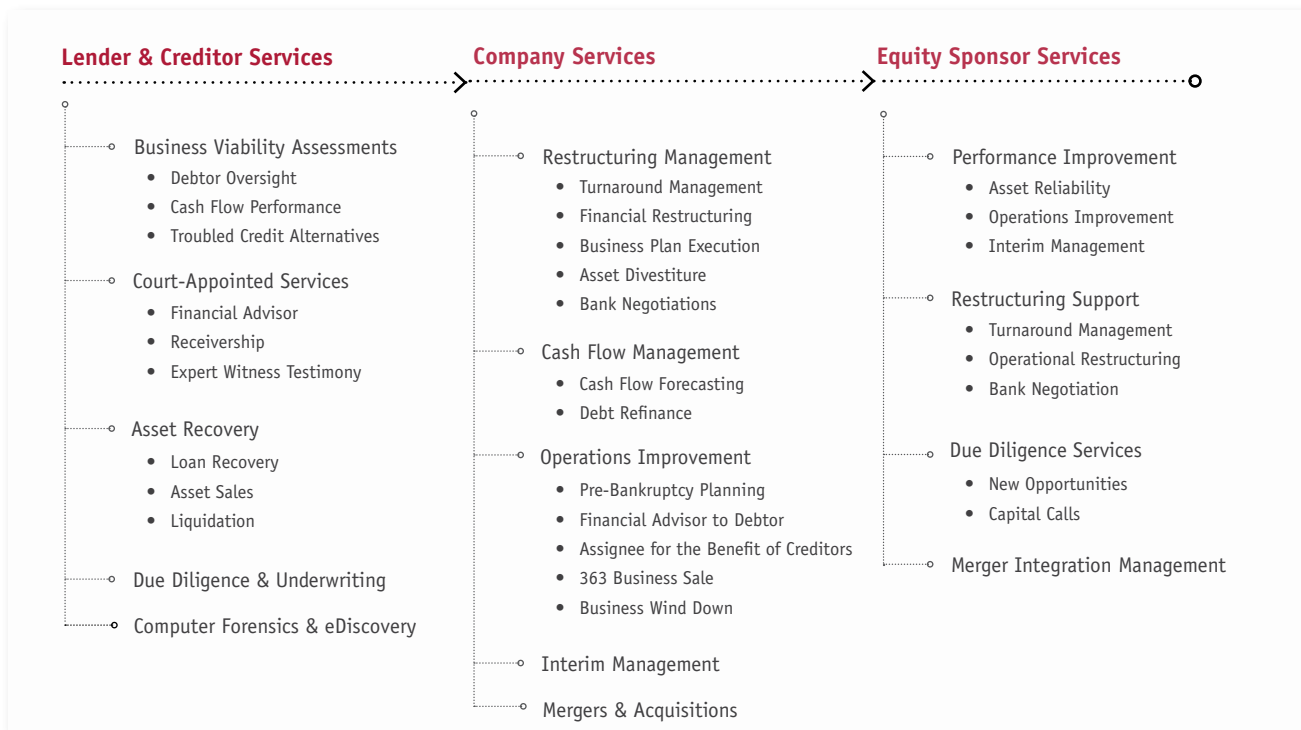
Named the Financial Restructuring Advisor of the Year by The M&A Advisor in 2008.

### Process

**Process Driven Approach:** Quickly assess a company's situation and offer clear recommendations on the best course of action.

**Rapid Response:** Deploy professionals with industry expertise to rapidly assess issues and devise solutions with associated timelines and cost-benefit analysis.

**Collaborative & Analytical Approach:** Undertake diagnostic measures to quantify and pinpoint areas of concern and work with client management teams to implement changes.



## 9. Contact

Focus Management Group is a leading business restructuring firm headquartered in Tampa, with offices in Atlanta, Chicago, Cleveland, Dallas, Los Angeles and Philadelphia. For more information regarding our experience in the dairy arena, contact one of our experienced Managing Directors listed below:

### Corporate Offices

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Tampa, FL 33609  
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Fax: (813) 281-0063  
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### Key Contacts

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## About the Authors



Juanita Schwartzkopf has 25 years of experience in commercial banking, financial management and risk management. She has served as a lender, board member and consultant to many agricultural entities ranging from agricultural crop producers to dairy cooperatives, beef producers and equipment manufacturers. She also has owned and operated a dairy, grain and beef farm in the Midwest. In a recent engagement, Juanita managed the transition of a dairy operation into a successful beef and crop production enterprise, which significantly improved cash flow.

Juanita can be reached at (813) 281-0062 or via e-mail at [j.schwartzkopf@focusmg.com](mailto:j.schwartzkopf@focusmg.com).



Lassiter Mason is an accomplished professional with over 15 years of experience in long-term strategic financial planning, corporate restructuring and crisis management. He has extensive experience in both the dairy and agricultural industries. Recently, he was engaged to review and restructure the cash flow and forecasting of a multi-location dairy operation. Lassiter's analysis provided the company insight in order to determine the combination of feed costs, milk prices, and milk production which provided the operation opportunities to successfully reduce debt.

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