



# Evaluating Feeding Financials

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# Evaluating Feeding Financials

- **Feed costs are the highest expense on a P&L.**
  - Which measurements guide us to higher profit either through increased revenue or decrease cost or some combination?
  - Which measurements guide us to better decisions?
  - Are we monitoring and tracking the right information for daily, weekly, monthly and yearly decisions?
  - Which measurements guide us to higher feed efficiency?

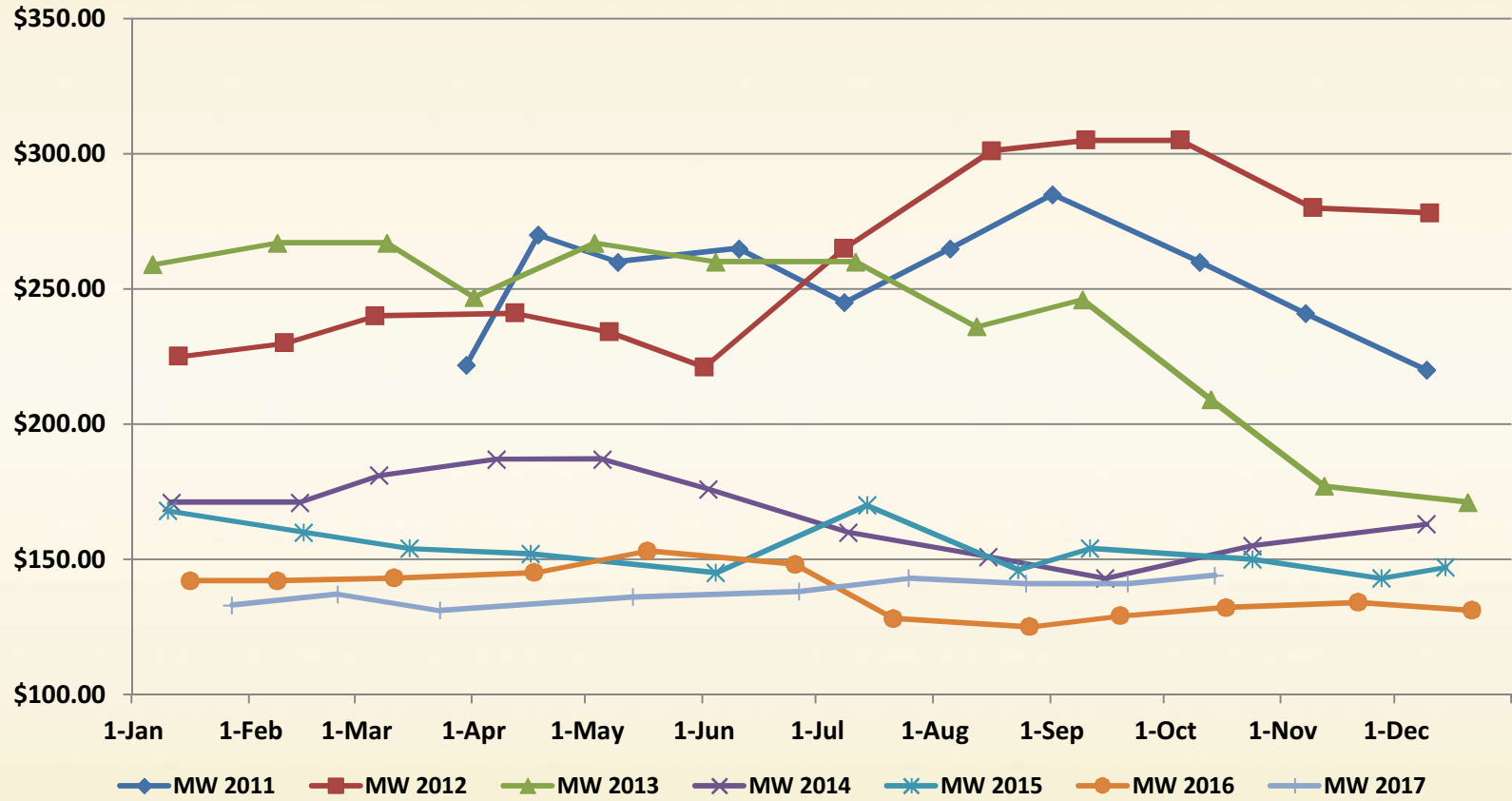
# Feed Financial Terms

- **Feed costs** – per ton, per lb, per lb DM, per hd, per cwt, per ECM cwt, per FCM cwt, per MCM cwt, actual feed costs, static feed costs, How are forage costs being valued?
- **Milk** – lbs, cwt, components, FCM 3.5% or 4%, ECM 3.5% fat and 3.0% protein or 4% fat and 3.0% protein, lbs fat and protein, MCM or RCM
- **Milk Value** - \$ per cwt, component values, PPD, basis, quality premiums, What drives the milk check?
- **Dry matter intake** – Are we tracking DMI? Do we have feeding software? Does DMI include weighback or not? Are DM's being adjusted on wet feeds routinely?
- **Inventory** – How much do we need? How do we monitor?
- **Shrink** – It is real! Where is it? Are we tracking? How are we tracking?

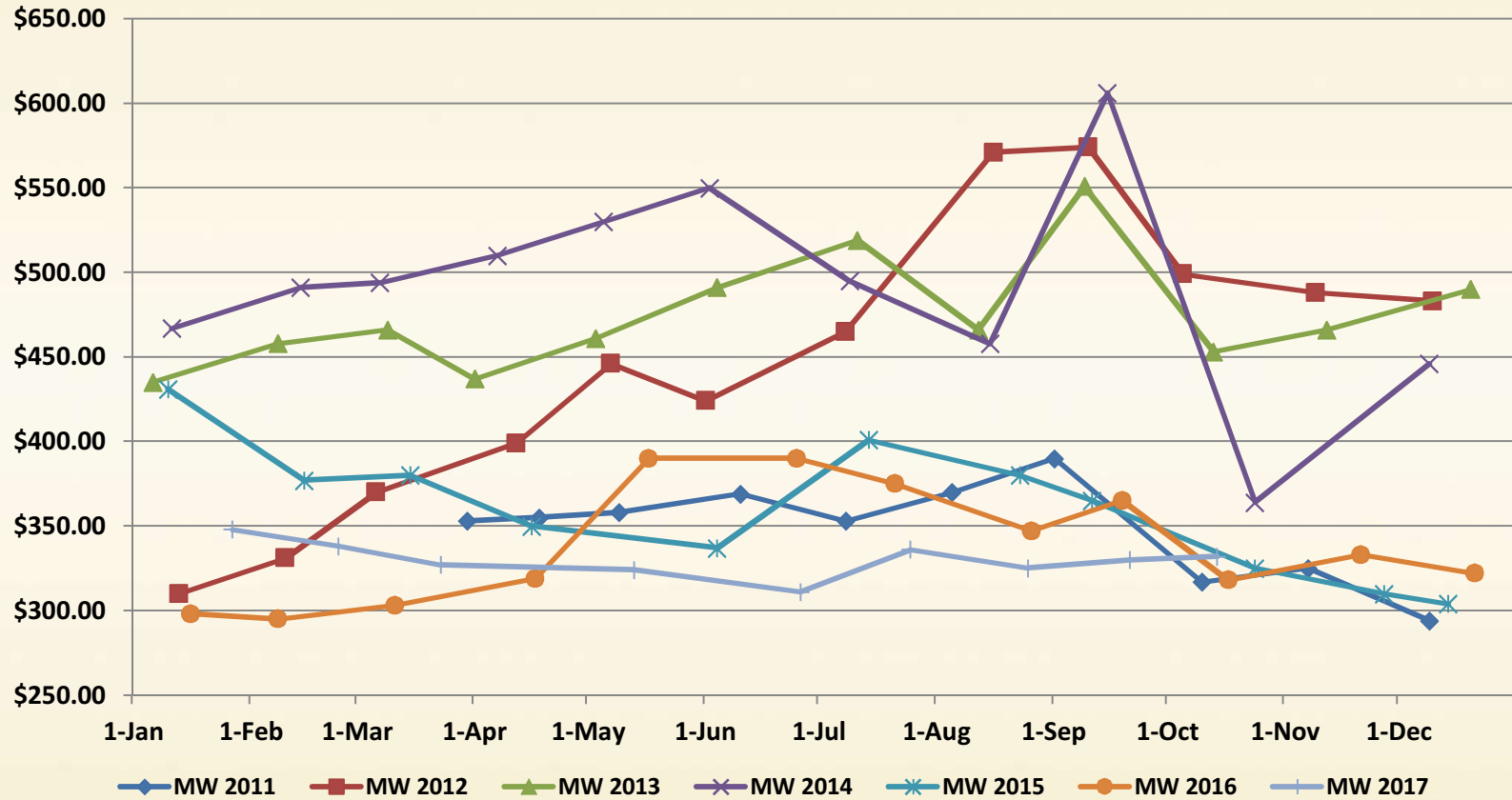


# Market View

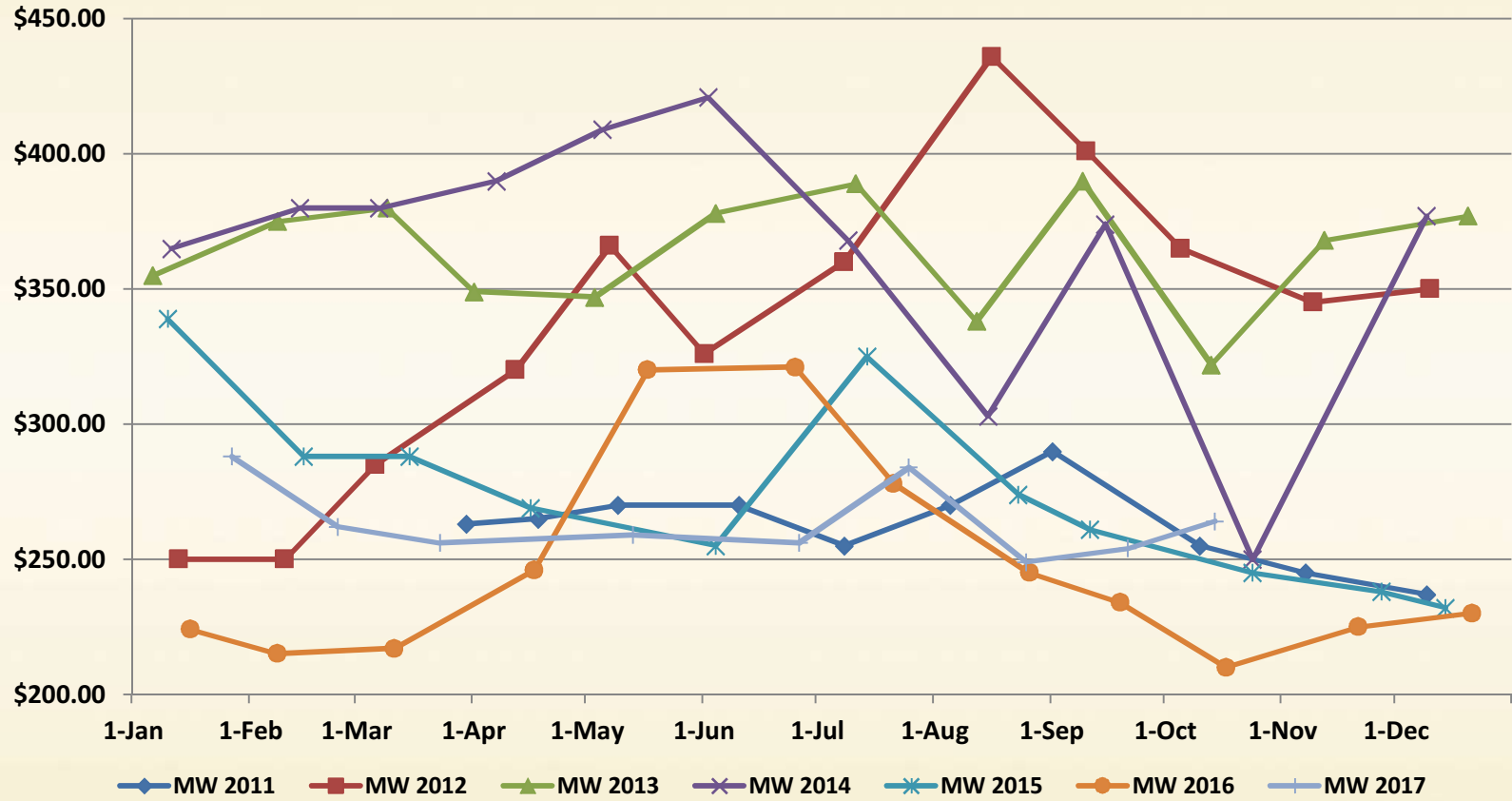
## Corn, Ground



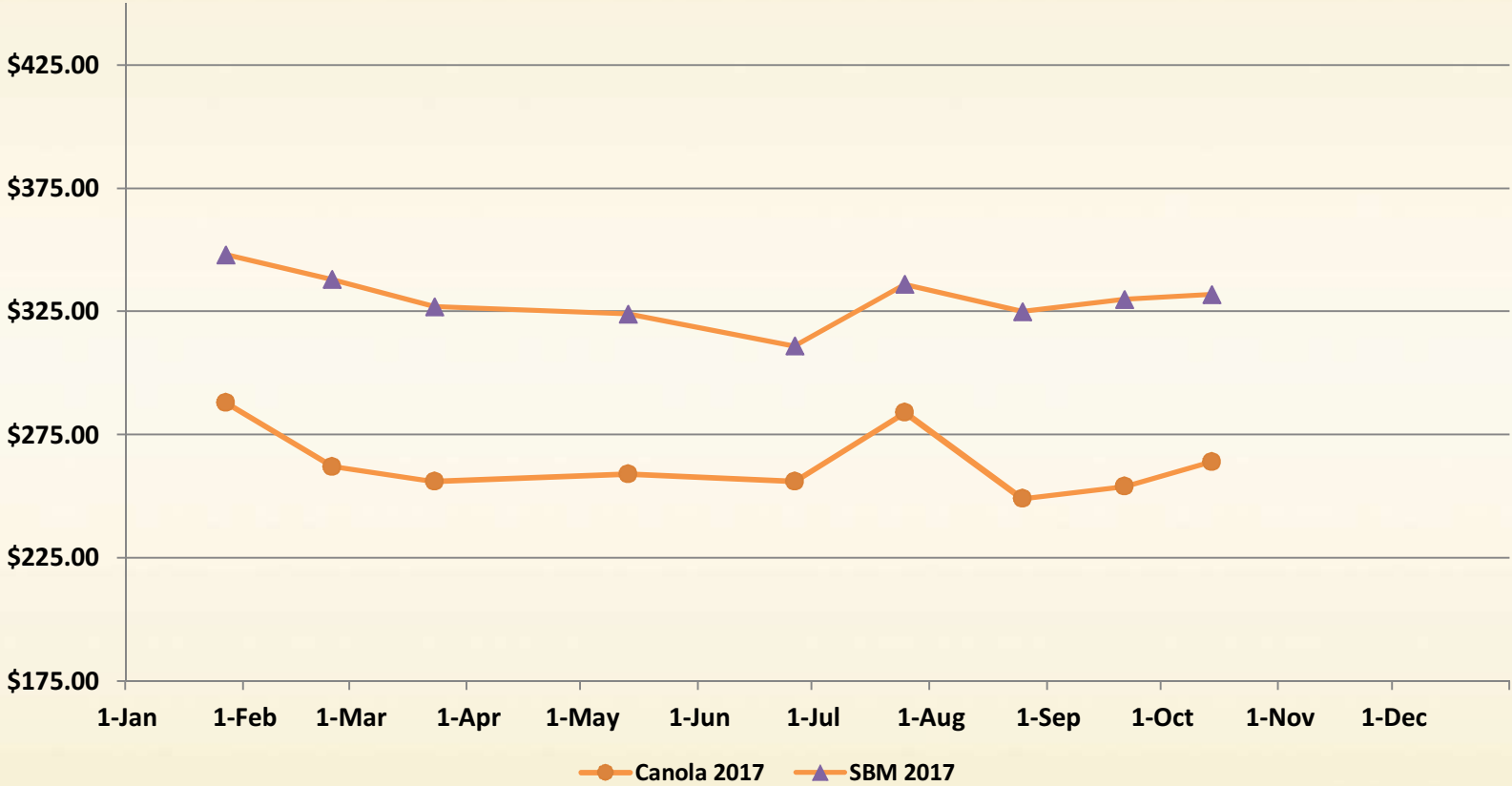
## Soybean Meal



## Canola Meal

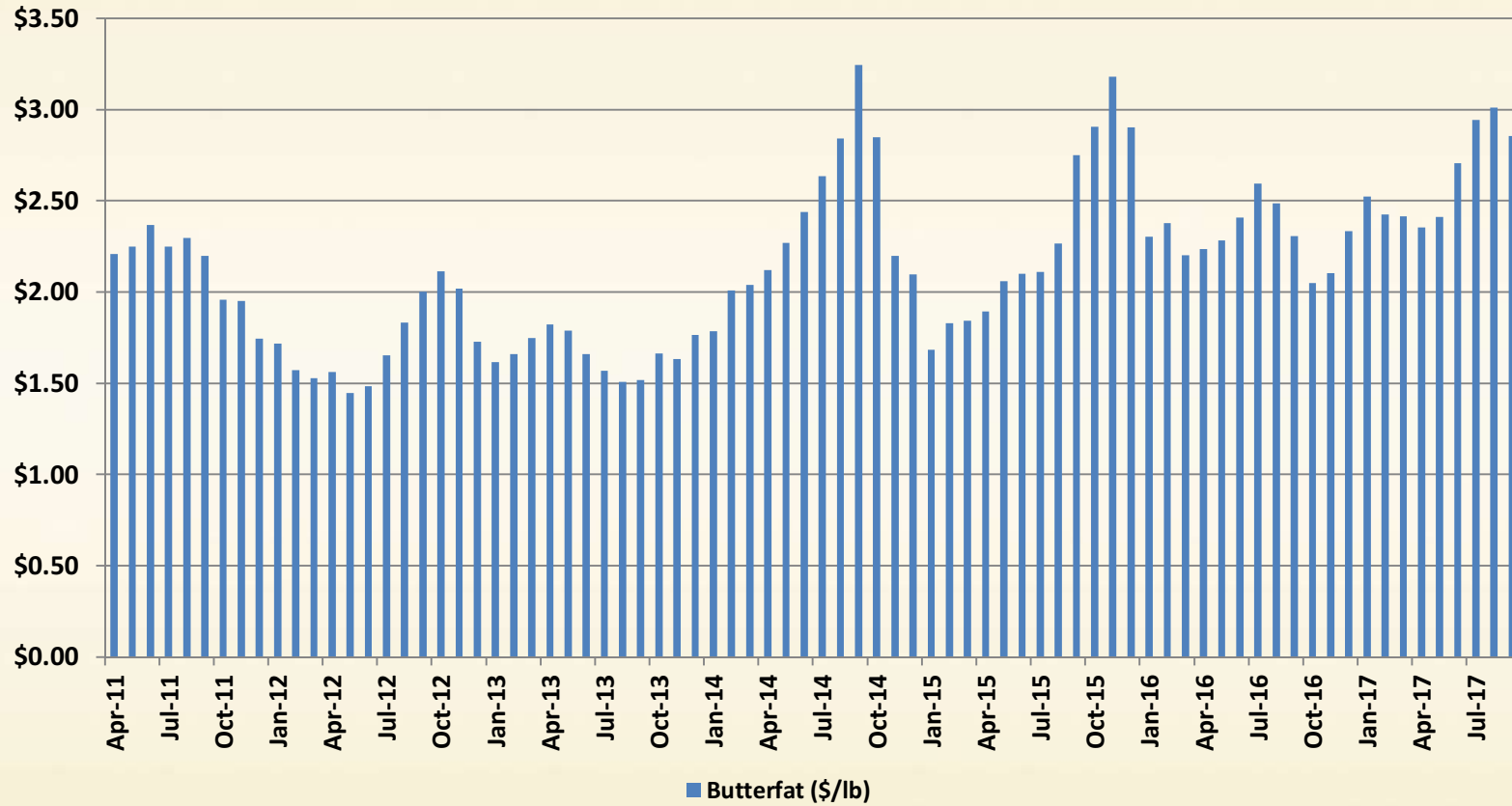


# Midwest Canola Meal and Soybean Meal Pricing

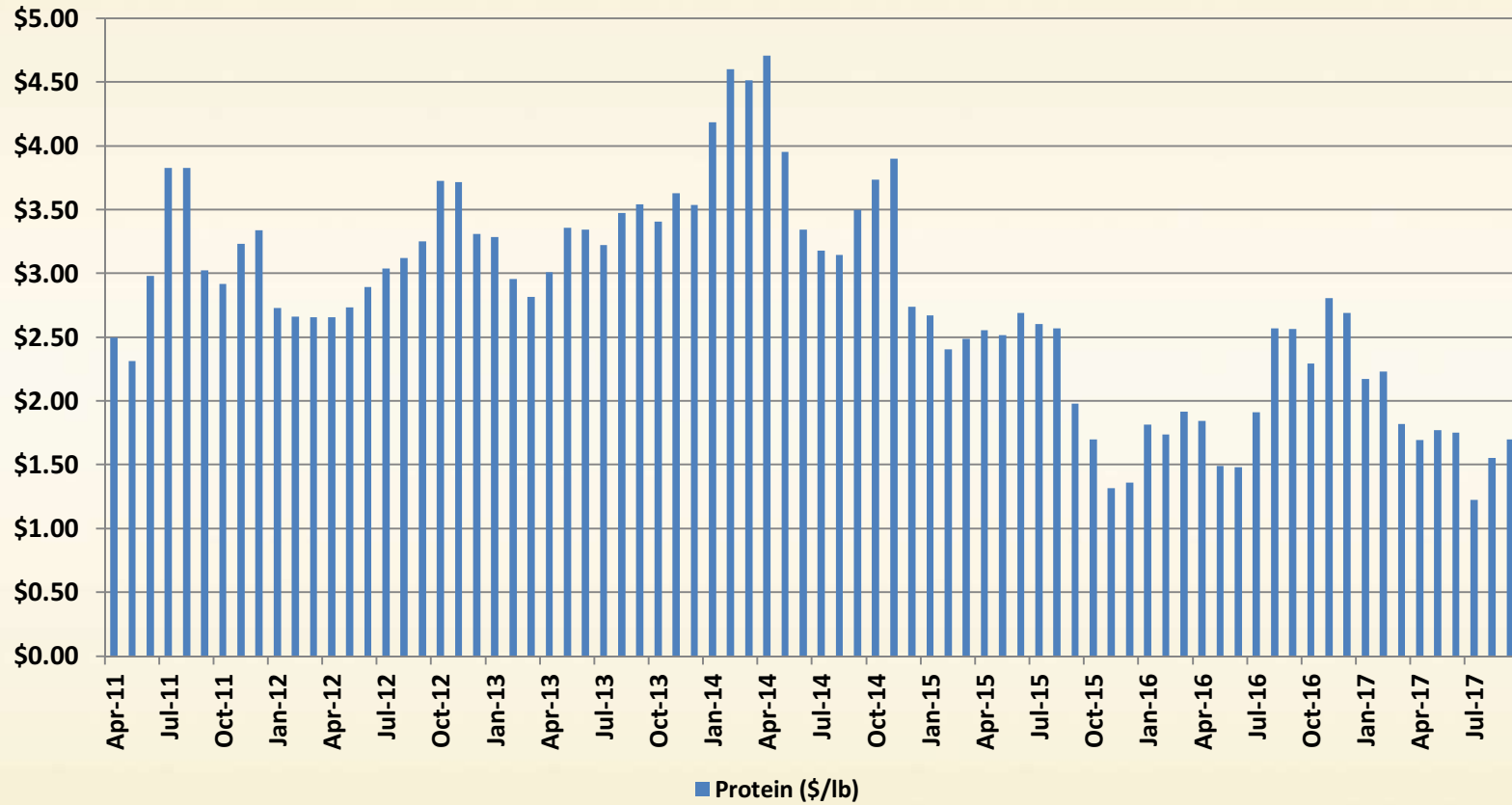




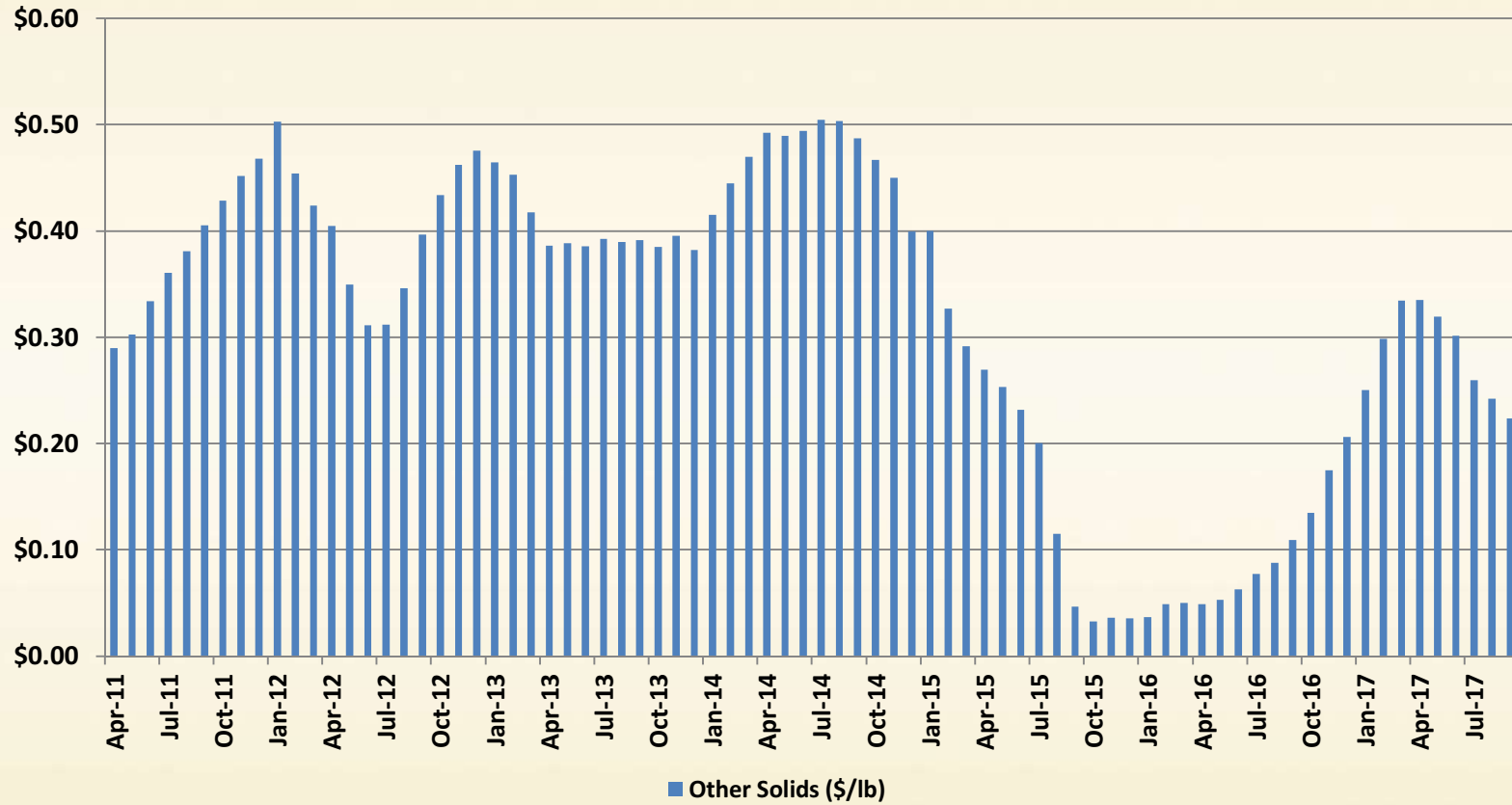
## Butter Fat (\$/lb)



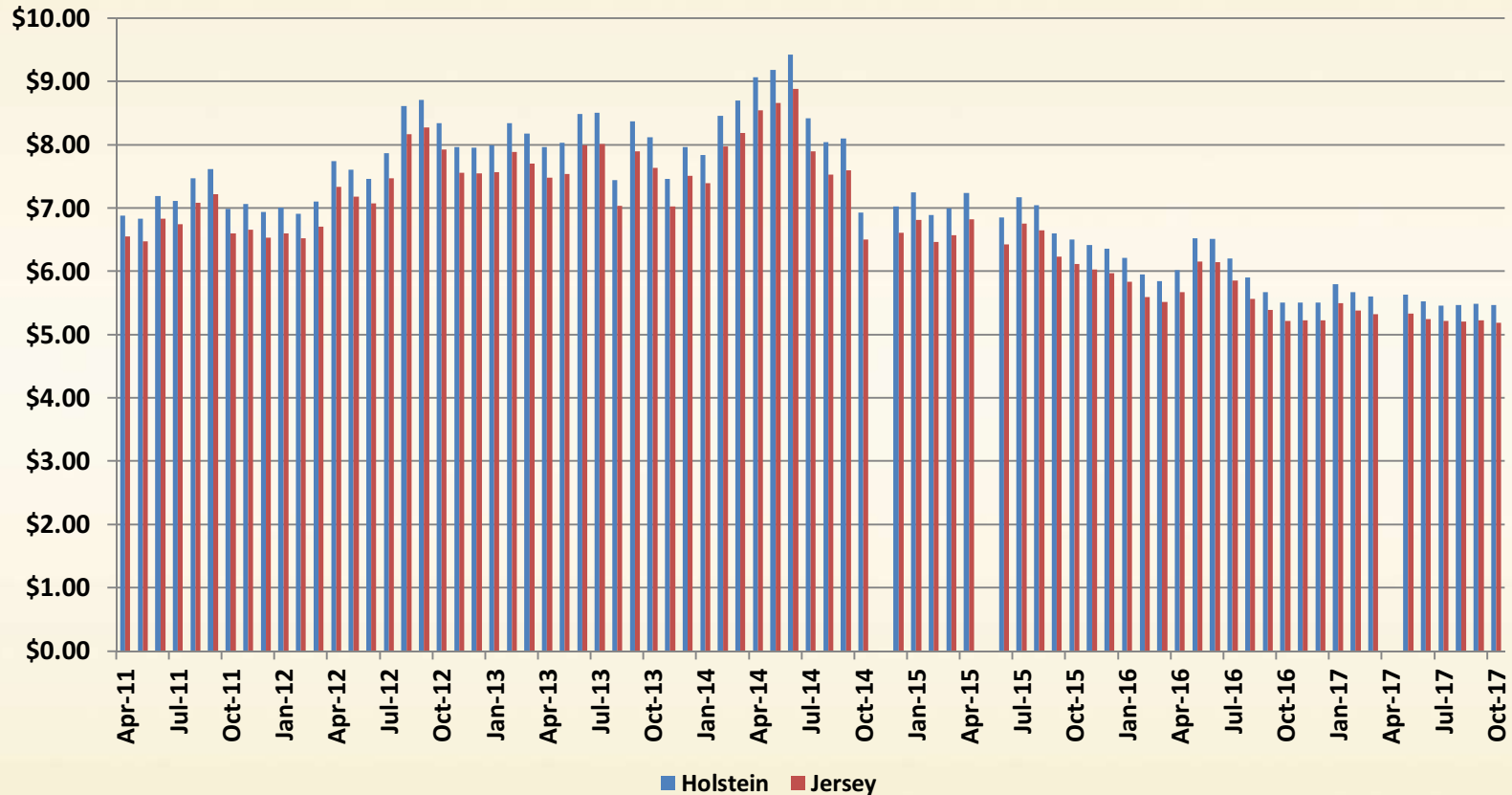
## Protein (\$/lb)



## Other Solids (\$/lb)

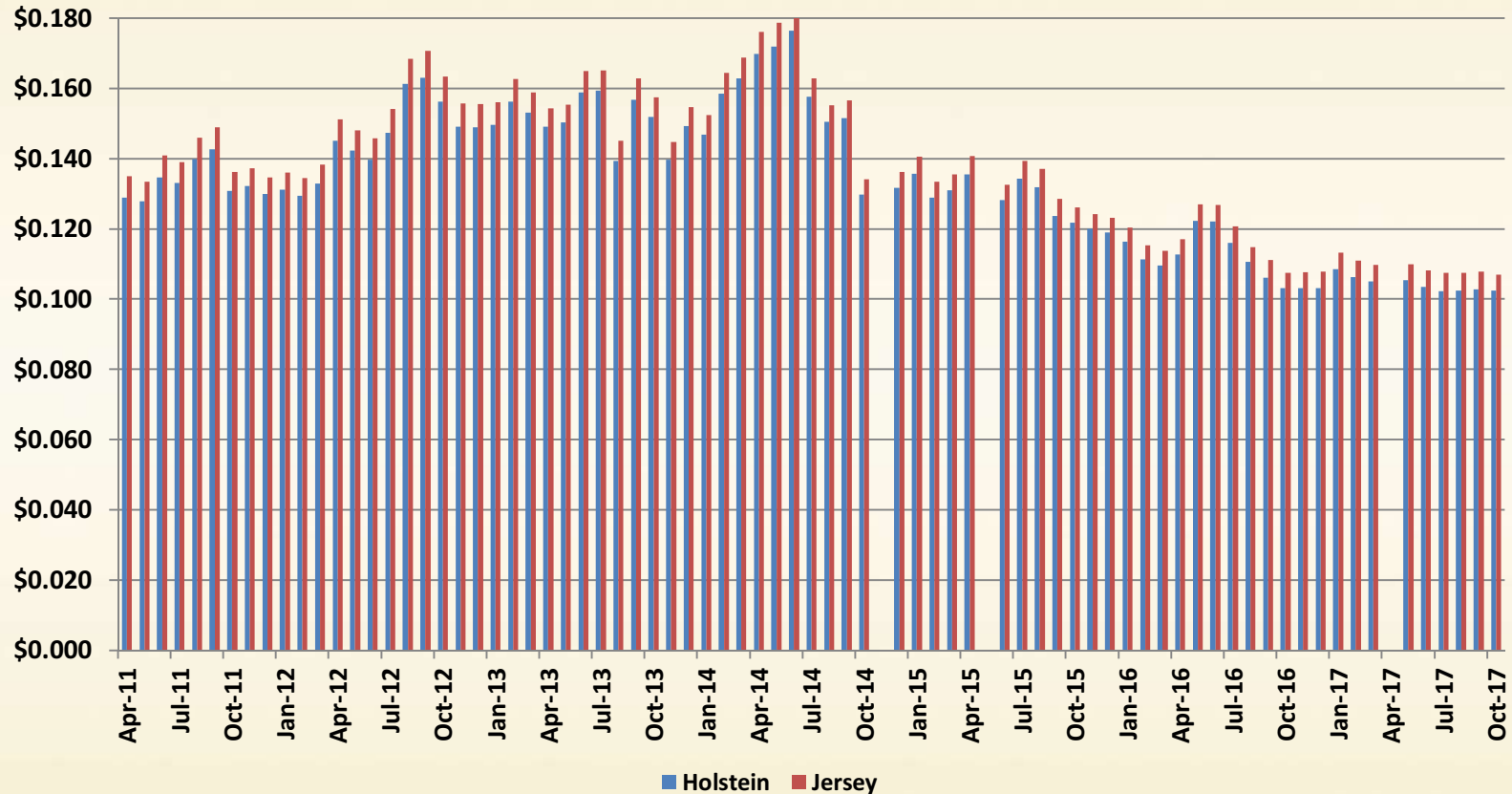


## Midwest Nutrient Cost (\$/cow/day)



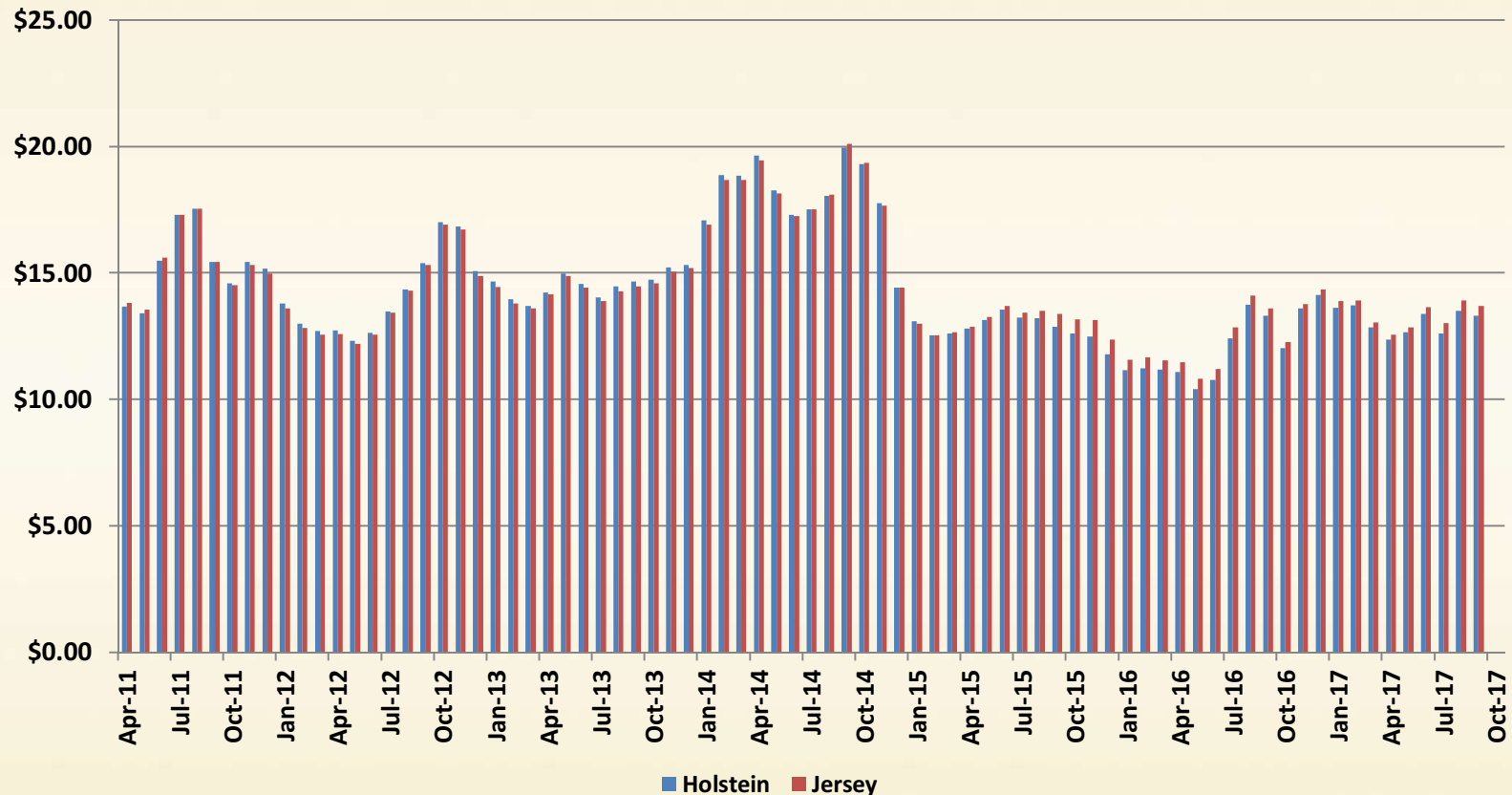
Nutrient Cost for a Holstein cow (1500 lb body weight, 53.4 lbs DMI, 80 lbs/d milk production w/ 3.6% fat, 3.0% protein, 5.7% other solids) and a Jersey cow (1200 lb body weight, 48.5 lbs DMI, 65 lbs/d milk production w/ 4.8% fat, 3.6% protein, 5.7% other solids) (St-Pierre, 2011, ADSA DC22-Milk Components).

## Midwest Nutrient Cost (\$/lb DM)



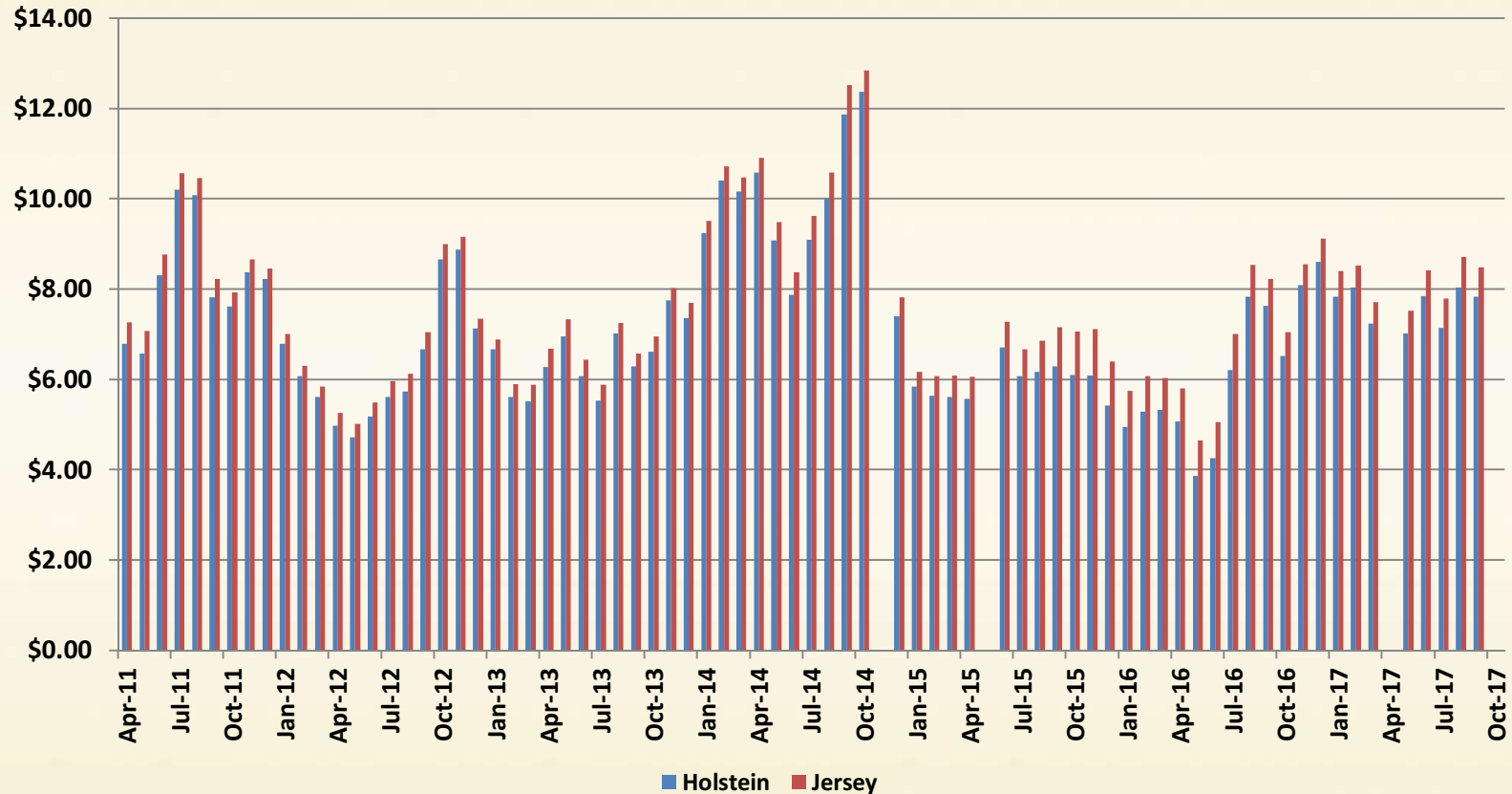
Nutrient Cost for a Holstein cow (1500 lb body weight, 53.4 lbs DMI, 80 lbs/d milk production w/ 3.6% fat, 3.0% protein, 5.7% other solids) and a Jersey cow (1200 lb body weight, 48.5 lbs DMI, 65 lbs/d milk production w/ 4.8% fat, 3.6% protein, 5.7% other solids) (St-Pierre, 2011, ADSA DC22-Milk Components).

## Estimated Milk Income (\$/cow/day)



Based on component pricing ([www.ams.usda.gov](http://www.ams.usda.gov)) for a Holstein cow (1500 lb body weight, 53.4 lbs DMI, 80 lbs/d milk production w/ 3.6% fat, 3.0% protein, 5.7% other solids) and a Jersey cow (1200 lb body weight, 48.5 lbs DMI, 65 lbs/d milk production w/ 4.8% fat, 3.6% protein, 5.7% other solids) (St-Pierre, 2011, ADSA DC22-Milk Components).

## Midwest Income Over Nutrient Cost (\$/cow/day)



Based on component pricing ([www.ams.usda.gov](http://www.ams.usda.gov)) for a Holstein cow (1500 lb body weight, 53.4 lbs DMI, 80 lbs/d milk production w/ 3.6% fat, 3.0% protein, 5.7% other solids) and a Jersey cow (1200 lb body weight, 48.5 lbs DMI, 65 lbs/d milk production w/ 4.8% fat, 3.6% protein, 5.7% other solids) (St-Pierre, 2011, ADSA DC22-Milk Components).



# Farm view



## Feed costs per cwt on P&L's

- Calculated by accrual usage of feed consumed (or fed) by milking and dry cows divided by cwts of milk shipped.
- Provides long term picture of how well the farm converted feed costs into saleable cwts.
- Takes into account mil cow numbers, milk level, prices paid for feeds, DMI, shrink, weighbacks, hospital cows, dry cow numbers, and dry period lengths.
- It is impacted by reproduction performance, DIM, cow comfort, milking frequency, facility design, as well as other factors.
- Biggest weakness is it ignores the value of milk. Both components and SCC. Comparing accross different component level herds would be misleading information.

## Feed costs per “corrected” cwts on P&L’s

- Corrected cwts trying to take into account differences in components of milk to help provide a better financial number.
- FCM – Fat Corrected Milk typically corrected to 3.5% milk fat. No correction for milk protein.
- ECM - Energy Corrected Milk typically corrected to 3.5% fat and 3.0% protein. Corrects for the energy of the milk but not value.
- MCM – Money Corrected Milk is corrected for a value for milk fat, milk protein, other solids, quality, hauling, and basis. Developed by Dr. Greg Bethard. A revenue-based measure.

# Income over feed costs (IOFC)

- IOFC can be seen calculated on P&L's as milk income minus feed costs either as \$, or per cwt, or per corrected cwt.
- A better reference of IOFC is the margin that is calculated as milk revenue per cow per day minus feed costs per cow per day.
- Feeding and management changes that increases IOFC would be good as long as the change does not impact cow health.
- IOFC is influenced by feed costs, milk price, DMI, milk lbs, and the value of the components and premiums.
- Most common margin used to measure feeding economics.

# Component lbs

- Calculated by adding the lbs of fat and lbs of protein together per day.
- Easy calculation and has become an indicator for quick reference to performance.
- Component lbs has been used in conjunction of DMI to calculate a component efficiency metric.
- Component static revenue and static feed costs can be used to calculate Component IOFC.

# Money Corrected Milk (MCM)

- Revenue based measure of cow productivity.
- Takes into consideration the economic value of components and milk check assessments.
- MCM is expressed back to lbs of milk per cow per day and typically uses 3.5% milk fat and 3.0% milk protein along with 5.70% other solids for basis.
- Results can be monitored daily and actions taken when appropriate.
- Analysis to recipe changes like additives can be monitored with better confidence to their benefits.

# Feeding Efficiency

- Measures the relative ability of cows to turn feed nutrients into milk or milk components.
- Typically calculated using a milk output metric divided by intake (DMI).
- Many milk output metrics are being used:
  - **Milk/DMI** - misleading and should not be used
  - **ECM/DMI** - more widely used
  - **FCM/DMI** - does not take into account protein.
  - **Total components/DMI**
  - **MCM/DMI** – takes into account value of milk output.
- Feed efficiency is one tool to use for monitoring herd performance but should never be used alone!

# MCM IOFC or Static IOFC

- Calculated by using a fixed price for feed, component prices, and other milk check assessment values that reflect market conditions.
- Calculation will reflect changes in cow performance taking into consideration feed costs, DMI, milk lbs, component value and component changes in milk.
- Results can be monitored daily and actions taken when appropriate.
- Analysis to recipe changes like additives can be monitored with better confidence to their benefits.
- Provides the best measure of dairy feeding economics.

# Calculations of Financial Performance

Milk, lbs	Fat %	Protein %	DMI	Feed \$	\$/hd/day	IOFC	ECM	MCM	Lbs fat & prot	3.5% FCM
95.0	3.68	3.10	60.0	\$ 6.30	\$ 17.60	\$ 11.30	98.1	98.6	6.44	97.8
92.0	3.90	3.10	60.0	\$ 6.30	\$ 17.62	\$ 11.32	97.7	98.8	6.44	98.0
<b>Class III</b>	<b>\$ 16.34</b>									
<b>Fat \$/lb</b>	<b>\$ 2.85</b>									
<b>Protein \$/lb</b>	<b>\$ 1.70</b>									
<b>other Solids</b>	<b>\$ 0.22</b>									
<b>Basis - all other</b>	<b>\$ 1.50</b>									
<b>Cost per lb DM</b>	<b>\$ 0.105</b>									



# Calculations of Financial Performance

Milk, lbs	Fat %	Protein %	DMI	Feed \$	\$/hd/day	IOFC	ECM	MCM	Lbs fat & prot	3.5% FCM
95.0	3.68	3.10	60.0	\$ 6.30	\$ 17.50	\$ 11.20	98.1	98.1	6.44	97.8
92.0	3.90	3.10	60.0	\$ 6.30	\$ 17.30	\$ 11.00	97.7	97.0	6.44	98.0
<b>Class III</b>	<b>\$ 16.35</b>									
<b>Fat \$/lb</b>	<b>\$ 1.75</b>									
<b>Protein \$/lb</b>	<b>\$ 2.64</b>									
<b>other Solids</b>	<b>\$ 0.40</b>									
<b>Basis - all other</b>	<b>\$ 1.50</b>									
<b>Cost per lb DM</b>	<b>\$ 0.105</b>									

# Calculations of Financial Performance

Milk, lbs	Fat %	Protein %	DMI	Feed \$	\$/hd/day	IOFC	ECM	MCM	Milk/DMI	ECM/DMI	MCM/DMI
95.0	3.68	3.10	60.0	\$ 6.30	\$ 17.60	\$ 11.30	98.1	98.6	1.58	1.63	1.64
92.0	3.90	3.10	60.0	\$ 6.30	\$ 17.62	\$ 11.32	97.7	98.8	1.53	1.63	1.65
95.0	3.90	3.10	63.0	\$ 6.62	\$ 18.19	\$ 11.58	100.9	102.0	1.51	1.60	1.62
Class III	\$ 16.34										
Fat \$/lb	\$ 2.85										
Protein \$/lb	\$ 1.70										
other Solids	\$ 0.22										
Basis - all other	\$ 1.50										
Cost per lb DM	\$ 0.105										

# Calculations of Financial Performance

Milk, lbs	Fat %	Protein %	DMI	Feed \$	\$/hd/day	IOFC	ECM	MCM	ECM/DMI	MCM/DMI
88.8	3.62	3.09	58.2	\$ 6.11	\$ 16.28	\$ 10.17	90.9	91.3	1.56	1.57
87.0	3.82	3.12	58.2	\$ 6.11	\$ 16.49	\$ 10.38	91.6	92.4	1.57	1.59
89.4	3.84	3.15	61.3	\$ 6.44	\$ 17.04	\$ 10.61	94.6	95.5	1.54	1.56
<b>Class III</b>	<b>\$ 16.34</b>									
<b>Fat \$/lb</b>	<b>\$ 2.85</b>									
<b>Protein \$/lb</b>	<b>\$ 1.70</b>									
<b>other Solids</b>	<b>\$ 0.22</b>									
<b>Basis - all other</b>	<b>\$ 1.50</b>									
<b>Cost per lb DM</b>	<b>\$ 0.105</b>									

# Calculations of Financial Performance

Milk, lbs	Fat %	Protein %	DMI	Feed \$	\$/hd/day	IOFC	ECM	MCM	Milk/DMI	ECM/DMI	MCM/DMI
91.0	3.78	3.11	62.0	\$ 6.51	\$ 17.13	\$ 10.62	95.3	96.0	1.47	1.54	1.55
80.6	4.15	3.35	54.6	\$ 5.73	\$ 16.35	\$ 10.62	90.0	91.7	1.48	1.65	1.68
65.0	5.05	3.90	46.0	\$ 4.83	\$ 15.46	\$ 10.63	83.4	86.7	1.41	1.81	1.88
Class III	\$ 16.34										
Fat \$/lb	\$ 2.85										
Protein \$/lb	\$ 1.70										
other Solids	\$ 0.22										
Basis - all other	\$ 1.50										
Cost per lb DM	\$ 0.105										

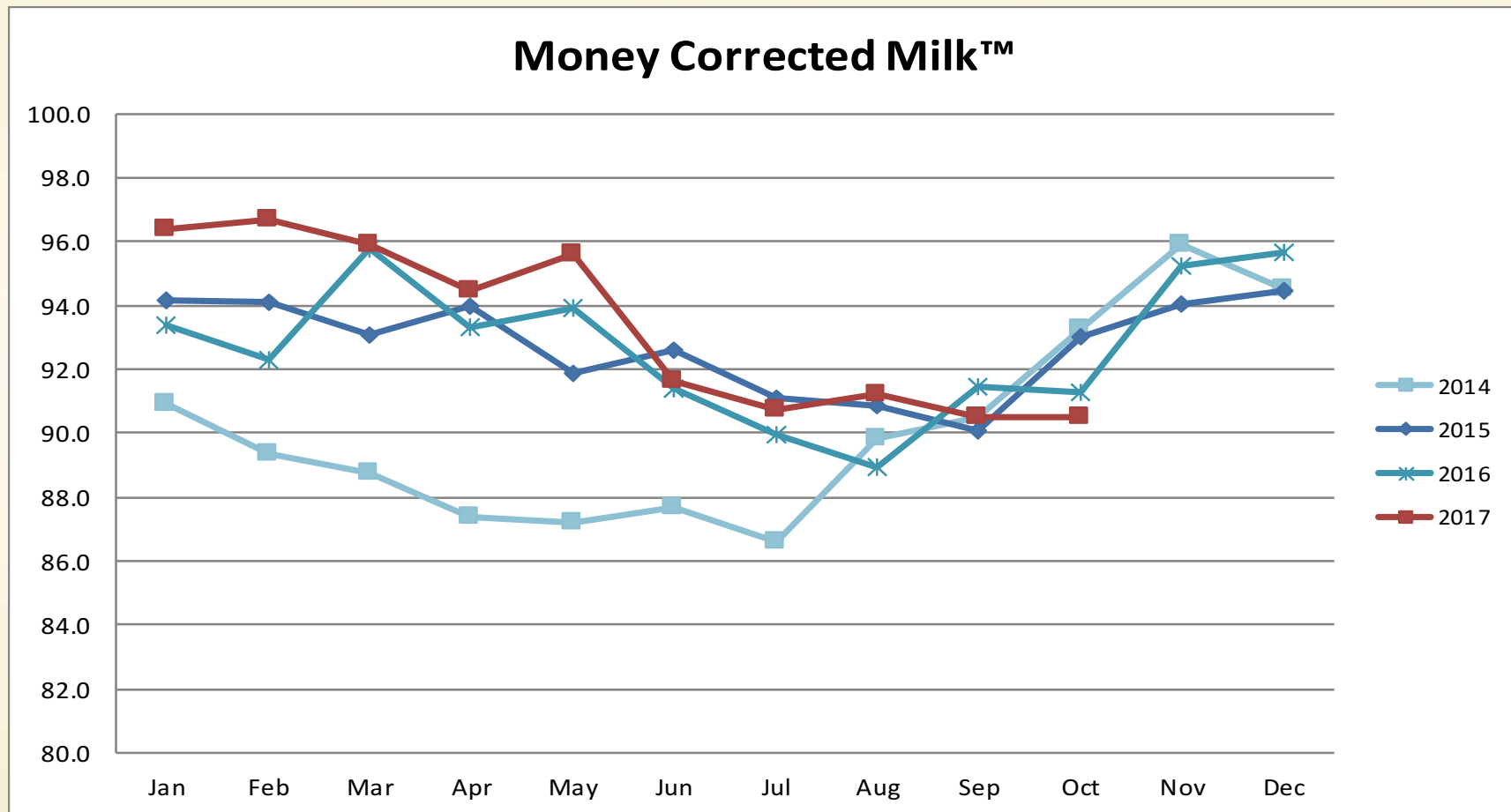
# Calculations of Financial Performance

Date	Milk Sold	Cows in Tank	Hosp	% Hosp	% mast	Meter Milk	Tank Milk	Fat	Prot	DMI	SCC	Meter MCM	IOFC
1	491,360	5,235	105	2.0	1.2	78.3	93.9	4.34	3.49	54.6	185	93.5	\$12.85
2	382,200	5,251	106	2.0	1.2	79.4	72.8	4.22	3.45	53.9	172	93.2	\$12.86
3	437,670	5,147	106	2.1	1.2	83.1	85.0	4.09	3.33	54.4	184	94.1	\$12.99
4	445,595	5,160	98	1.9	1.0	84.1	86.4	4.03	3.31	53.9	175	94.2	\$13.08
5	437,315	5,171	89	1.7	1.2	84.6	84.6	4.15	3.40	54.9	180	97.6	\$13.66
6	382,600	5,191	95	1.8	1.0	80.4	73.7	4.15	3.46	54.4	162	93.9	\$12.96
27	441,890	5,116	102	2.0	1.4	82.9	86.4	4.04	3.32	53.5	171	93.1	\$12.90
28	381,760	5,114	106	2.1	1.4	84.8	74.6	4.21	3.35	53.2	168	97.5	\$13.84
29	435,780	5,143	92	1.8	1.3	85.8	84.7	4.18	3.36	53.6	187	98.5	\$14.01
30	489,040	5,154	83	1.6	1.1	86.4	94.9	4.16	3.35	53.8	185	98.8	\$14.05
31	443,780	5,080	93	1.8	1.2	83.2	87.4	4.06	3.32	54.3	184	93.7	\$12.92
<b>Total</b>	<b>13,200,790</b>	<b>5140</b>	<b>107</b>	<b>2.1</b>	<b>1.4</b>	<b>82.7</b>	<b>82.8</b>	<b>4.16</b>	<b>3.38</b>	<b>54.3</b>	<b>186</b>	<b>95.2</b>	<b>\$13.24</b>
										<b>TANK----&gt;</b>	<b>95.4</b>	<b>\$13.27</b>	

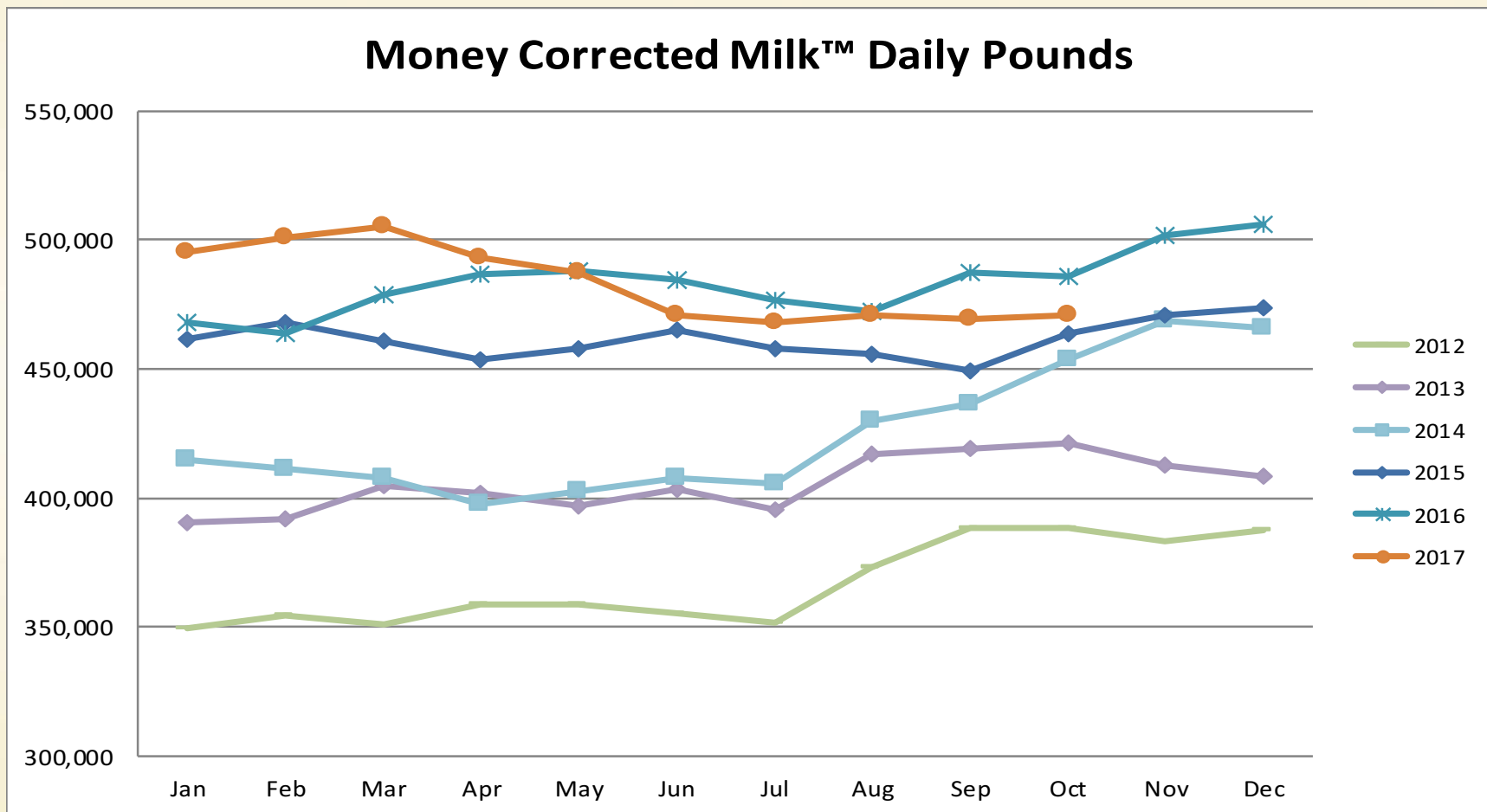
# Calculations of Financial Performance

NOTES		
4-Oct	Started feeding Bunker 7 corn silage in heifer, Dry cow and Low cows.	
5-Oct	Started feeding Bunker 7 to High and Milk Heifer	
10-Oct	Increased corn .4-.7 lbs across milk cows	
14-Oct	started blending Bunker 3 haylage into high, low and Milk Heifer	
13-Oct	Started blending Bunker 3 into heifer and dry cow loads	
13-Oct	Added straw to fresh premix instead of stand alone ingredient	
15-Oct	Started blending Bunker 3 into Fresh cows	
24-Oct	Started Blending into Bunker 5 2017 Corn Silage in High, Low and Milk Heifer	
19-Oct	On all Bunker 3 Haylage	
11-Oct	On all Bunker 7 Corn Silage	
29-Oct	Changed gearbox on 2906 mixer	
30-Oct	Increased corn .5 in High and Milk Heifer	

# Calculations of Financial Performance



# Calculations of Financial Performance





# Evaluating Feeding Financials

- Develop a better understanding of what influences your financial bottom line. Feed costs should be at the top of your understanding.
- If you do not track and monitor performance and cost, you will make wrong decisions.
- Monitor and track information such as milk, components, DMI, cows milked, cows in tank, .....
- Use metrics like ECM, MCM, and static IOFC to make feeding economic decisions.
- Know your costs per lb DM and how those costs were derived.
- Know the value of your components.

# Evaluating Feeding Financials

- Don't let shrink eat your profits.
- If you do not have feeding software now is the time to invest.
- Don't underestimate what a farm scale can do for you.
- Invest in a time/person to keep information up to date.