

# Milk Market WATCH

October 2007

## Outlook Q4 2007

With the rising tide of dairy prices lifting all the 'ships' pricing the dairy complex, conventional wisdom suggests that higher prices eventually pull in higher production. It would make sense that the record prices, particularly for powder, would

eventually encourage substantial gains in production as producer margins theoretically improve and profits invested into expansion. The challenge with that theory is it ignores what is happening from an input cost perspective. With almost every regional survey and internal data suggesting a dramatic lift in the cost of production in 2008, this theory is having difficulties proving out. Feed, fuel, and fertilizer are the big culprits on the year and with those futures markets pointing to a continuation

**"Enough to say that even a \$15 price is not sufficient to cover primary production costs, let alone a return on investment and risk.."**



of those costs, it points to further challenge to margins. Enough to say that even a \$15 price is not sufficient to cover primary production costs, let alone a return on investment and risk. With feed costs essentially a lock for the 2007 crop, milk production is not going to lift much while demand erodes summertime stocks. The inverted futures market is working to constrain any production expansion by stagnating herd growth while feed markets constrain lifts in per cow production. Already facing a negative balance proposition, the inversion only makes nearby trading more volatile and further uncertainty for on farm planning. Uncertainty does not equal expansion, which will reign in milk supply expansion.

## FUNDAMENTAL BALANCE

Right now there is an epic tug-of-war occurring between supply and demand. With record prices sure to bring on a 'flood' of milk supply, almost every industry pundit is predicting a fast and certain growth in milk production. Still, the milk is not showing up despite nearly 6 months of lifted prices. Continued downward revisions to the production report for cows and milk and a fall-off in milk equivalent production from a Jul spike should bring the focus back onto how the supply chain will deal with 3% growth in demand from year to year without selling the market off. The fact is that milk inventories, while near a seasonal high, are not that

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spectacular and forecast to draw-down further. Combined with heavy export pressure from a weakening US\$ and worldwide tight milk inventory, the demand pressures on milk supply not only are building but are not going to go away in the intermediate term.

Supply side outlook is neutral for the next 3-6 months for the following reasons:

- ✓ Herd size is not going to peak out at USDA forecasted levels of 9.17 mil. head this quarter as revisions have taken a 10-15,000 head hit on current inventory and broad uncertainty around the accuracy of current head counts. Slaughter reports suggested a summertime surge in dairy cow slaughter which moderated in Sep. Added up there is a 15,000 head shortfall in the herd size and this has to work its way through the system at some point. I expect to end the year at 9.145-9.15 mil. head mostly driven by a slight bump in herd consolidations heading into the new year.
- ✓ Replacement prices have not regressed much with fall time milk prices down substantially from the record summer. While some may say expansion demand keeps driving price higher I believe it is more to do with high herd turnover and limited supply that keeps replacement prices high. Moreover, when you do the budgeting, it is tough under current lender loan to values to lift herd size without committing substantial working capital. Working capital surpluses are not super prevalent and are usually first committed to debt/accounts payable reduction. There is some incremental expansion occurring, but it is in the minority of businesses, and as seen in the milk equivalent data, not enough to stem the lift in culling this summer. Looking forward, the \$2,000 plus replacement does not facilitate many wholesale expansion plans. Incremental expansions will be offset by continued high turnover rates, keeping the edge off expansion. If prices fell back below the 1800

level, then yes there would be wholesale expansion. At current levels with such uncertainty around milk pricing, it is too risky to commit to the higher prices. That fact will keep the edge off herd size for the foreseeable future.

- ✓ A small wrinkle with the US\$ that is going to keep herd size in check is with the CAN\$ at par and Canadian quota set to expand 5% in the coming months, there will be a slight pull to export US cattle to Canada should the border reopen as scheduled. With exchange rates changing, I see a more neutral effect on herd size from the Canadian border reopening with the dynamics quite different from the surplus building pre-bse conditions.
- ✓ Feed prices continue to be intolerably high, particularly when faced with an inverted milk market bottoming in the 15's. While some breaks this summer allowed effective feed hedging, the majority of feed will price at historically high prices and seriously constrain working capital if faced with \$15-17 milk prices in the coming year. This will do anything but encourage expansion and will likely facilitate further herd consolidation. While the futures market is oversold, the prospect of a 30-40% decline in milk:feed cost from the summer milk pricing peak means future feed conversions (past Q4 07) are break-even at best. This factor, more than any, will serve to constrain production in the longer term. I do think the \$17 price level is a short term phenomenon, otherwise there will be wholesale herd sellouts. Feed prices will 'pull' 18+ out of the market and that should keep production per cow growing around the 2% level after a fall-off this winter. Conversely, if the 18+ prices do not materialize, milk per cow gains will quickly be limited to 0.5% or less, furthering a milk supply imbalance into springtime and market conditions similar to this summer's volatility. Either way, feed prices are going to

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extract higher prices from the market, the question is how long will it take the market to realize the feed cost dynamic.

The demand picture is forming a few noteworthy trends that are bucking some seasonal patterns this summer. The argument that high prices are stifling demand has yet to prove out much anywhere except a bit in fluid and constrained pre-summer demand due to lack of powder availability. There is also a shift into butter/powder production, while creating a bit of excess butter, it is serving the premium-priced powder market. How long the flow shift occurs is up for some debate, but for now pricing power is pulling flows away from cheese, raising some questions for future flows and pricing.

- ✓ Currently, the butter market is raising concerns on the longer-term sustainability of pricing across the dairy complex. Butter stocks are now above the 2003 benchmark and until Sep were not declining in their normal seasonal pattern. While it is a result of a lift in powder production, the offset of this is record-high butter pricing on the international market (over \$2.50/pound) and brisk domestic butter sales. Historically, low butter prices have stimulated demand and this is likely to hold true throughout this year given record soy-bean prices. The export market is largely untested although summer numbers show a sharp ramp-up. With the price differentials, the orders will eventually materialize and this will marginally improve demand in a sales outlet without historical precedent. This should be enough to keep butter demand growth well over 10% this year and build some momentum into 2008. This won't be enough to work down inventories and stimulate price movements but should be sufficient when/if cheese prices recover enough to compete with powder and resume fortification.

- ✓ Cheese demand is getting some renewed attention after Jul buying spiked the charts in a counter-seasonal move. While this may be a result of fear-buying on price lifts, it likely is more to do with bargain purchasing on the pricing decline late into the month. With the wild price cycles continuing through fall, a baseline 3.0-3.5% growth in cheese demand is expected for the year despite sizable price lifts. There is a valid discussion on how US economy worries will affect overall dairy demand, which likely hits the cheese first. However, the fact remains that cheese has become a staple in the diet (either dining away from or at home) and demand growth has not been restrained by pricing. The question could be asked...if pricing was that much lower for cheese, would there be a demand boost? It is tough to justify a demand lift with lower pricing so equally as difficult to call for restrained demand on higher pricing. That said, with economy worries, 2.0% growth is merited for 2008.

- ✓ Powder demand is turning into bit of a wild-card for the year. With constrained output into summer (-12%) eating into demand (-3%) and exports (-16%) there is, in my mind, quite a bit of pent-up demand on the world market and a fall-off of sales because prior to Jul, the product was not available. International prices are still 30-40 cents over domestic prices and this has historically moved quite a bit of product when it is available. The South Pacific is still struggling with drought and feed availability and with the surge in their currency value, cannot be encouraged with longer-term pricing. That said, the US is well poised to export bunches of powder and set to rival 05/06 export levels. Milk exports as a percent of milk supply are down from 4.6% to 4.0% YTD. This can easily be made up with some big orders and is one of the reasons powder price continues its strength. This is a long-term strong factor for demand and

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should continue to take up 4% perhaps growing to 5% of domestic milk supply on the weak US\$ and continued growth in pacific rim economies.

Inventory is going to determine a large extent pricing going through 2008. I expect some moderation in all dairy pricing from Q2 forward as milk flow will shift some from powder into cheese as prices equalize some and slipping cheese inventories merit vat fortification. This likely happens in the 1.80's for cheese and powder. Cheese stocks are sufficiently low for sustained, high pricing through all of 2008. Depending on how much exports take up powder, powder price will stay safely above the 1.80 level despite seasonally heavy powder and cheese production. This balance works in the long-term, but may not prevent an irrational sell-off in Q1-Q2.

There is a wide body of evidence to suggest manipulative cheese sales that go against levels of carry and international pricing movements. With cheese exports lifting substantially in recent months, domestic price changes have been mostly counter to what is happening in the rest of the world. There are also reports of large sub-price export powder sales that may work against longer-term pricing. With new NASS rules and mandatory price audits, there is less of a chance for these activities distorting prices, but with new rules come new ways of getting around them at which the trade has proven plenty capable. That said, I am expecting bargain export sales and forced cheese sell-offs will factor into dairy pricing in 2008 and contributes to the pricing projections.

## FACTORS TO WATCH

A lot of weight is put on inventories as the 'equalizer' in pricing going through the next 12 months. With expected demand growth and muted supply lifts, milk supply will remain at historical lows through the end of 08. Several factors coming into play may place additional pressure on stocks which give more upside

than down to pricing outlooks in coming months.

- ✓ The rbST-free movement will take full force in Q1 for the eastern fluid market (currently half of fluid consumptions). This will bring a big hit regionally to cow numbers and per cow production. While the west may be able to make up for it seasonally in volume, a 1.0-1.5% hit in regional production is expected and this may very well limit production gains through Q3. There is rumor of rbST-free moving towards the cheese market but this is too tough to gauge and time at this point.
- ✓ Most every expert expects substantial rises in per cow productivity through 2008. Still, with high feed and forage prices expected to continue through 2008 and perhaps get higher as the US\$ devaluation could surge grain exports, this will be the most persistent challenge to feed conversions on record! A 50-60% rise in feed cost has only occurred once before since 1998 and that was for 2 quarters in 2004. The exaggerated feed AND replacement prices are likely to drive incremental herd consolidation and lifted year-end culling. If feed markets boost further into new-crop, there could easily be a 25-50,000 head hit on cow numbers and flatter milk-per-cow.

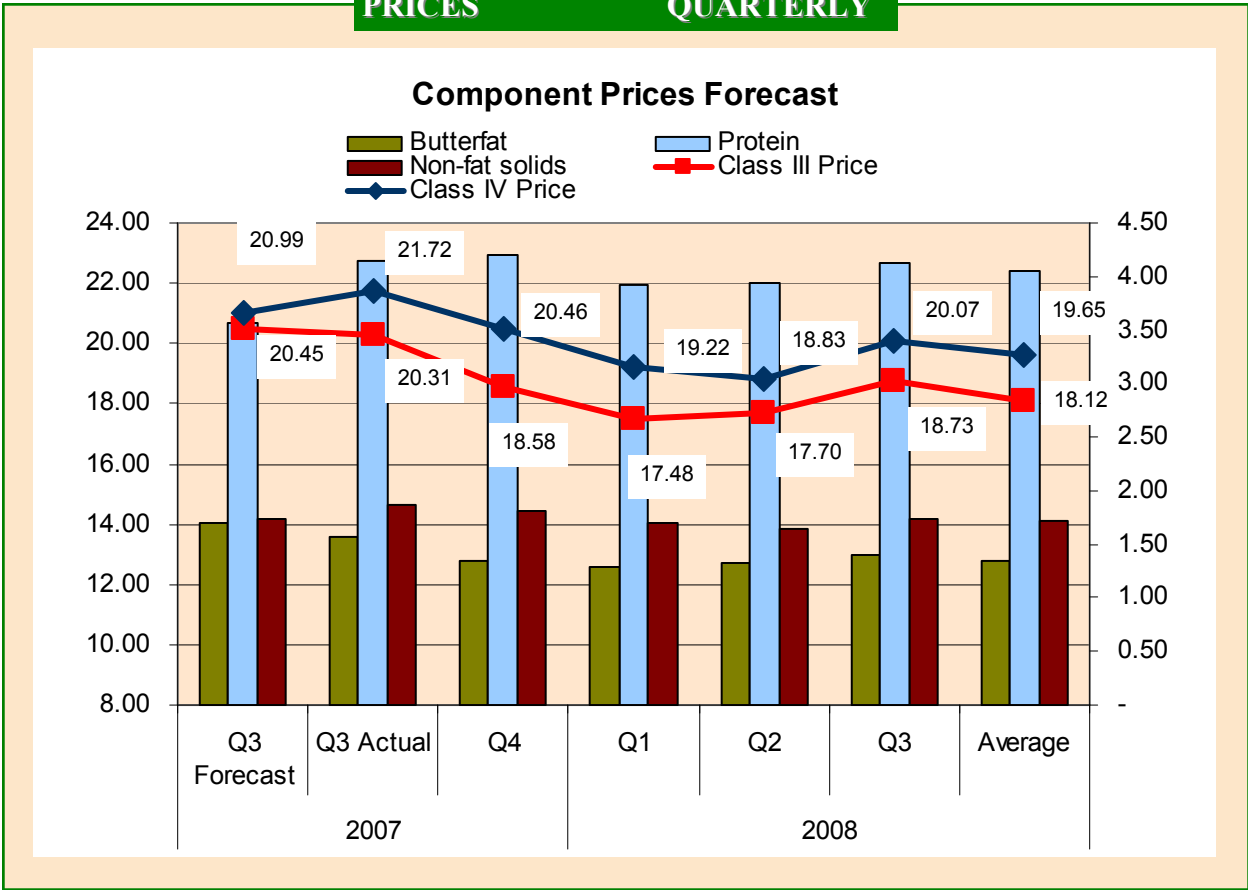
The factors are much more compelling for a challenging herd size and production environment than many analysis/outlooks have let on. For now, the timing of everything except the feed market compels a more conservative pricing outlook until inventories work-down as expected through year-end 07. The market needs to brace itself for flatter production than expected in the face of steady growth in demand. At the end of the day this points to higher prices. Yet as fall demonstrates, the manipulation of spot cheese pricing is amazing and this, more than anything, is going to limit production growth.



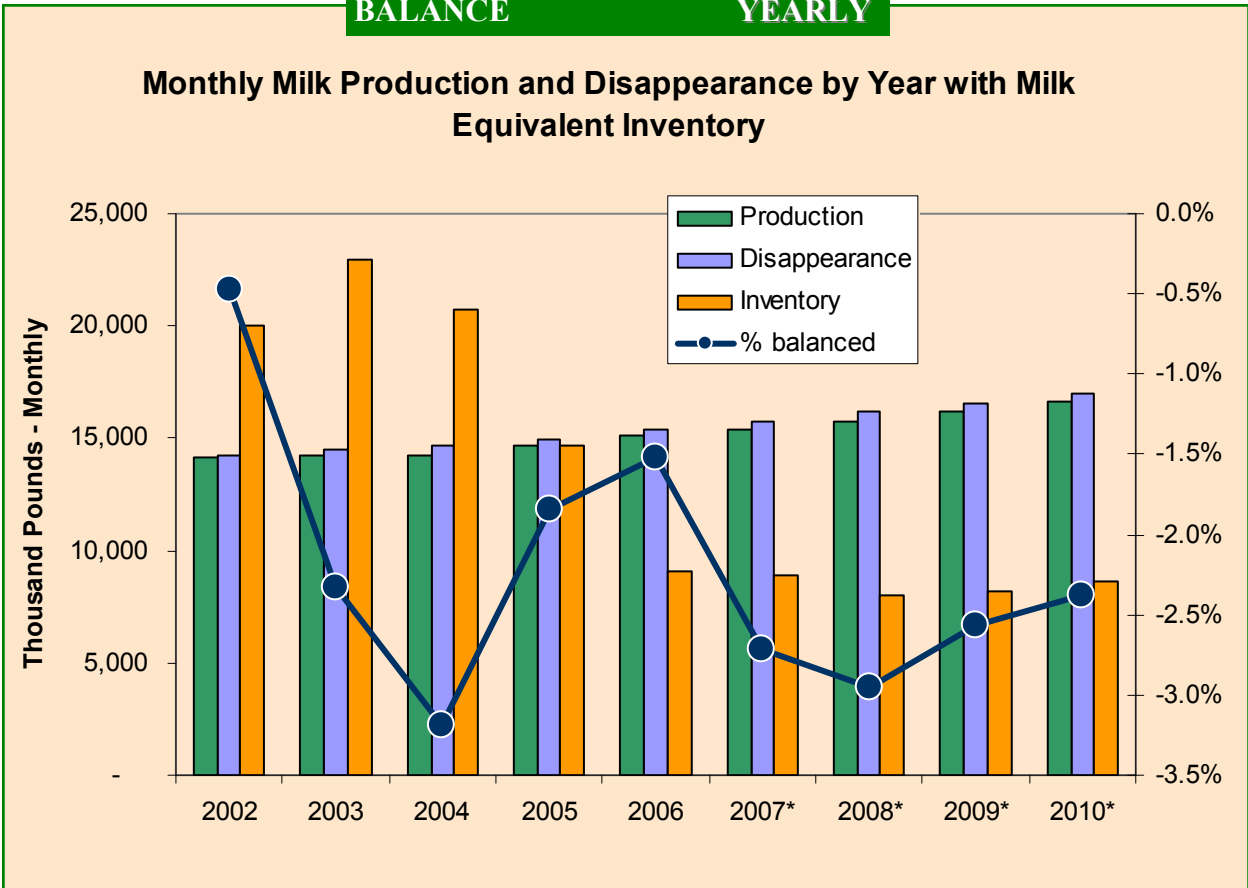
## PRICING OUTLOOK

Forecasts	Quarter	2007			2008			Average
		Q3 Forecast	Q3 Actual	Q4	Q1	Q2	Q3	
Block cheese	price	1.85	1.97		1.81	1.83		1.8675
Barrel cheese	price	1.81	1.97		1.80	1.81		1.8525
	average	1.83	1.97		1.81	1.82		1.8600
Butter	price	1.53	1.43		1.19	1.22		1.2350
NFDM	price	1.91	2.04		1.87	1.81		1.8975
Whey	price	0.85	0.61		0.41	0.42		0.4250
<b>Component values</b>								
Butterfat	\$/lb.	1.6918	1.5732		1.2838	1.3198		1.3378
Protein	\$/lb.	3.5733	4.1410		3.9224	3.9328		4.0428
Non-fat solids	\$/lb.	1.7355	1.8673		1.6959	1.6365		1.7231
Other solids	\$/lb.	0.6741	0.4246		0.2209	0.2312		0.2363
Class II Price		21.69	22.42		19.92	19.53		20.35
Class II Skim		16.32	17.51		15.96	15.43		16.21
Class II Butterfat		1.6988	1.5802		1.2908	1.3268		1.3448
Class III Price		20.45	20.31		17.48	17.70		18.12
Class III skim	\$/cwt.	15.05	15.34		13.46	13.56		13.93
Class IV Price		20.99	21.72		19.22	18.83		19.65
Class IV skim	\$/cwt.	15.62	16.81		15.26	14.73		15.51
III/IV skim differential								

**PRICES QUARTERLY**

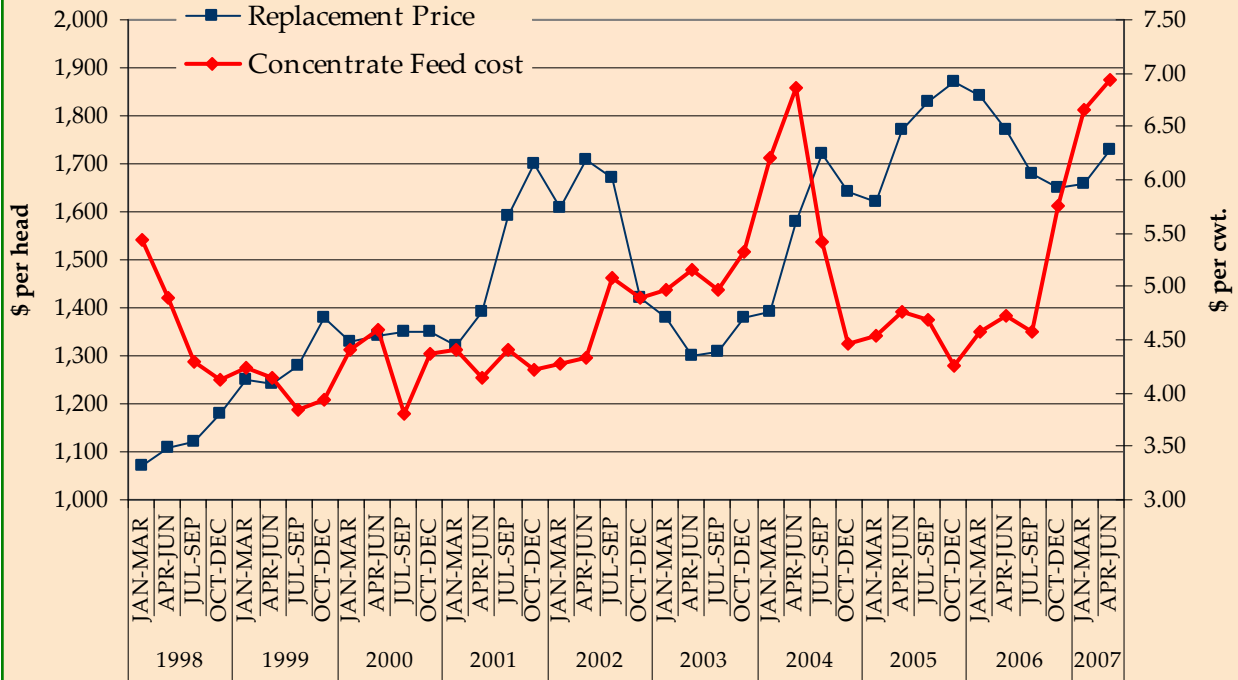


**BALANCE YEARLY**



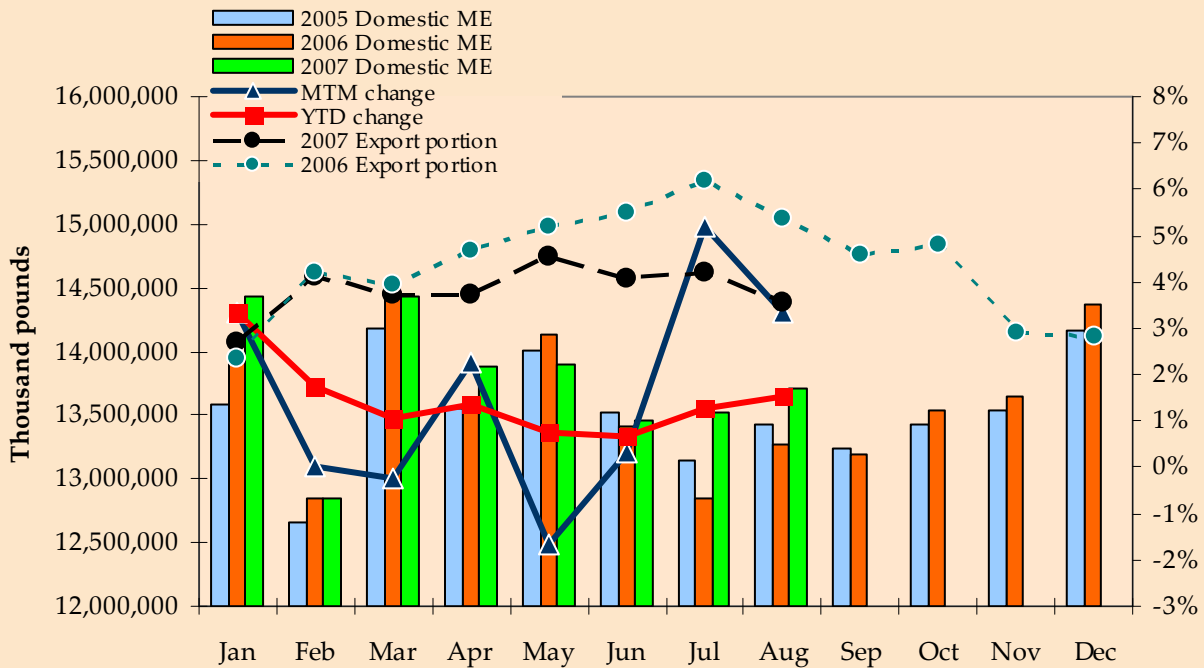
## INPUT PRICES      QUARTERLY

### Quarterly Purchased feed and replacement price

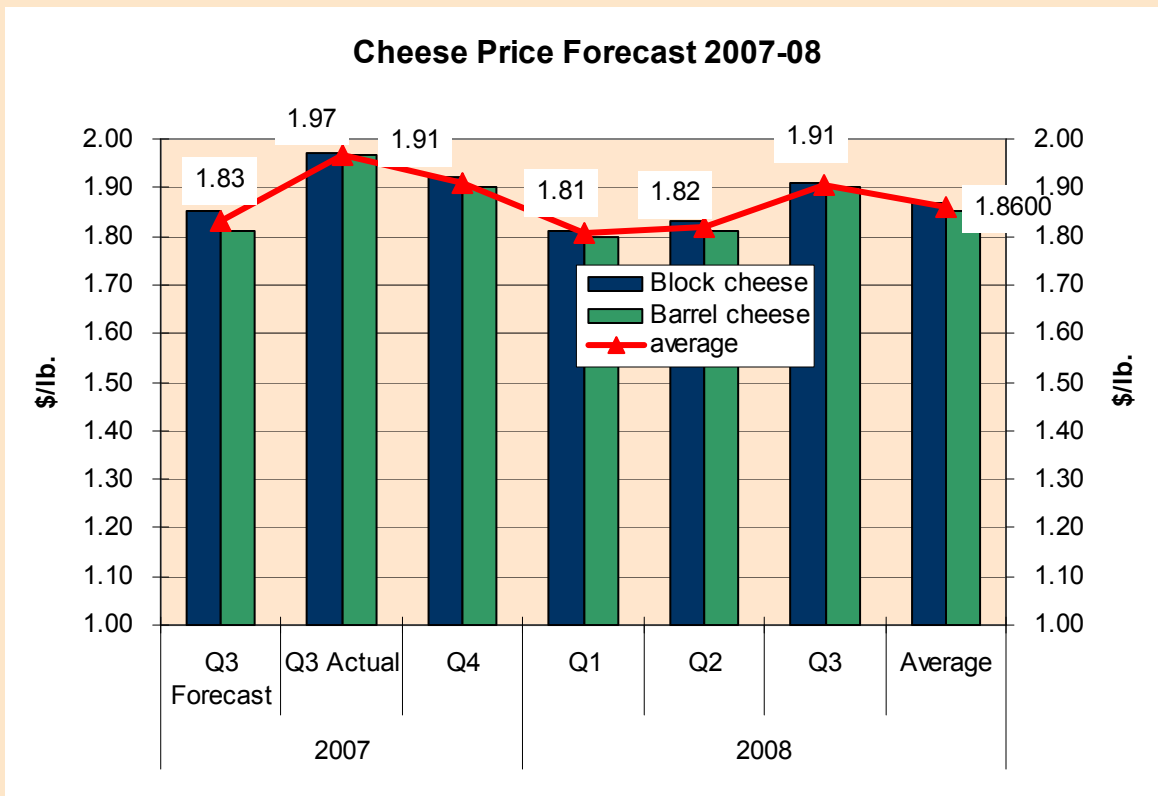


## DOMESTIC MILK      MONTHLY

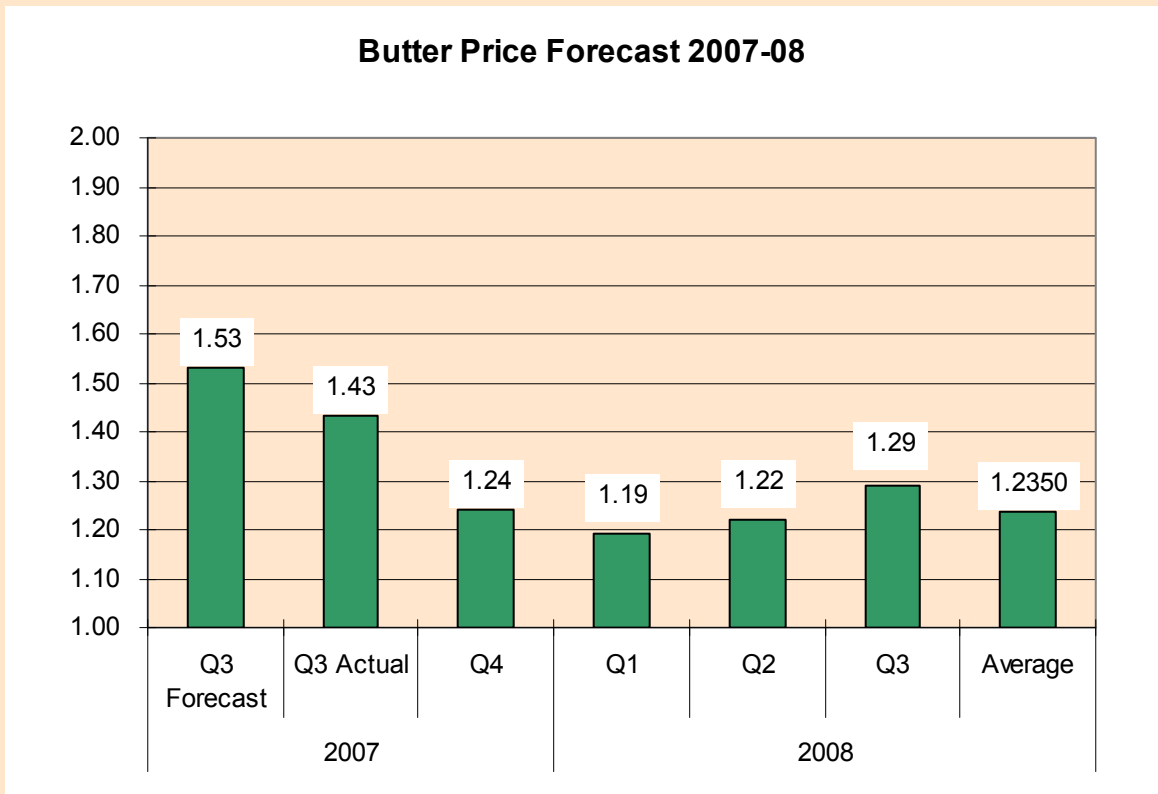
### Domestic Available Milk Equivalent Production: Fluid, Yogurt, Dry Milk, Butter, Cheese,



## Cheese price

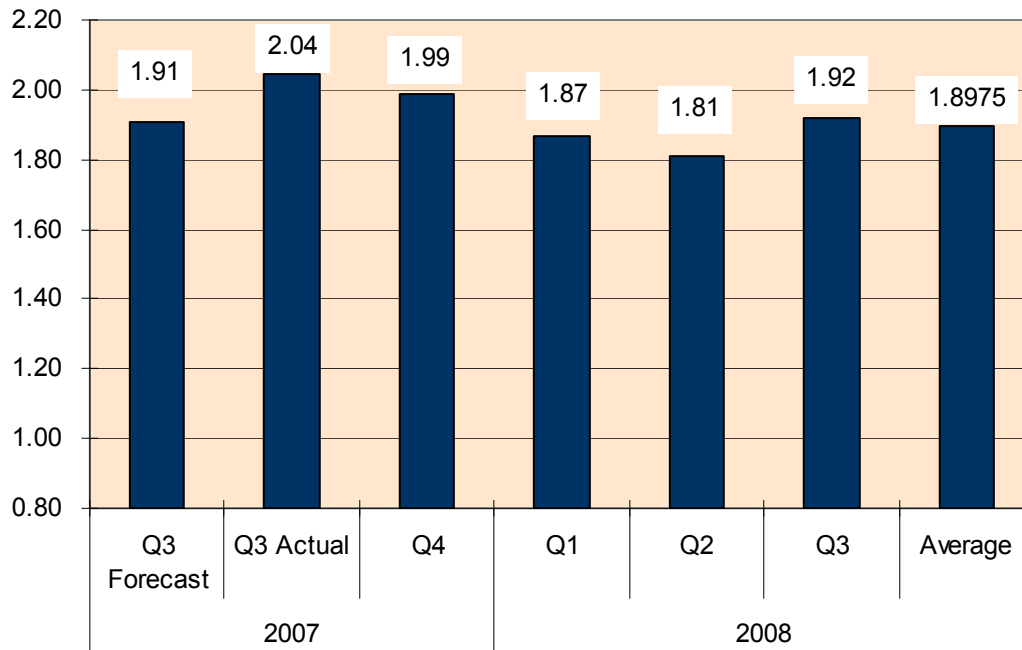


## Butter price



## NFDM prices

### NFDM Price Forecast 2007-08



## Balance Yearly

Milk-Equivalent (Million pounds)		Production	Disappearance	USDA removals	removal % of monthly production	Inventory	Inventory % of monthly production	Balance	% balanced
2002	year	170,063	170,870	9,392		20,061		(807)	(0.0047)
2002	month	14,172	14,239	783	0.0552	2,859	142%		
2003		170,394	174,365	7,897		22,920		(3,971)	(0.0233)
2003	month	14,200	14,530	658	0.0463	(2,152)	161%		
2004		170,805	176,241	103		20,768		(5,436)	(0.0318)
2004	month	14,234	14,687	9	0.00	(6,049)	146%		
2005		176,491	179,735	-		14,719		(3,244)	(0.0184)
2005	month	14,708	14,978	-	-	(5,605)	100%		
2006		181,833	184,586	-		9,114		(2,753)	(0.0151)
2006	month	15,153	15,382	-	-	(200)	60%		
2007*		184,500	189,500	-		8,914		(5,000)	(0.0271)
2007*	month	15,375	15,792	-	-		58%		
2008*		188,667	194,238	-		8,043		(5,571)	(0.0295)
2008*	month	15,722	16,186	-	-		51%		
2009*		194,118	199,093	-		8,218		(4,975)	(0.0256)
2009*	month	16,177	16,591	-	-		51%		
2010*		199,323	204,071	-		8,670		(4,748)	(0.0238)
2010*	month	16,610	17,006	-	-		52%		