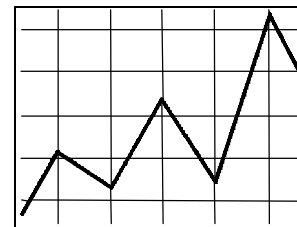


# MARKETING AND POLICY BRIEFING PAPER



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## 1998 Dairy Situation and Outlook

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### Recap of 1997:

Farm level milk prices were much higher than what had been forecasted for 1997. The Basic Formula Price (BFP) averaged \$12.05 per hundredweight, down \$1.34 from the record \$13.39 BFP set in 1996, but well above the \$11.83 BFP two years ago. The all milk price averaged \$13.38 per hundredweight for 1997, down \$1.33 from the \$14.71 average for 1996, but again well above the \$12.87 two years ago.

Farm level milk prices started the year well below year ago levels (Table 1). The BFP reached the years low in May at \$10.70 per hundredweight, \$3.18 lower than May 1996. Burdensome cheese stocks, a carry over from the year before, and sluggish commercial cheese sales had reduced the price of 40 pound cheddar cheese blocks on the Chicago Mercantile Exchange to \$1.1588 per pound, \$0.3337 per pound lower than the year before. Since more than 90 percent of the change in the BFP may be explained by cheese prices, it can readily be seen why the BFP was well below year ago levels. But the BFP started to increase by July as cheese prices moved higher and in November the BFP passed year ago levels and ended the year at a year's high of \$13.29 per hundredweight, \$1.95 higher than a year earlier. The December 40-pound cheddar cheese price averaged \$1.43 per pound, more than \$0.19 per pound higher than a year earlier. Retail prices which had been higher than the previous year slowed cheese sales, but by the last quarter of 1997, retail cheese prices fell below year ago levels (Table 2), and this along with a strong economy increased cheese sales considerably. The stocks of cheese ended the year up just 9 percent from a year ago (Table 3) compared to stocks up about 15 percent earlier in the year.

The only real cloud in the sky is nonfat dry milk stocks, which at the end of November stood at 380 million pounds, 144 percent more than a year ago. The Dairy Export Incentive Program (DEIP) was used during 1997 to sell surplus nonfat dry milk in foreign markets. U.S. nonfat dry milk exports during 1997—mostly made with DEIP export subsidies—were equivalent to about 23 percent of U.S. production of the product. Thus, DEIP exports of nonfat dry milk approached the relatively high levels recorded in 1992-94. The DEIP allocation for the year ending June 30, 1998 is nearly exhausted. This should not create severe downward pressure on nonfat dry milk prices since U.S. stocks of the product for 1998 are not expected to be as large as in 1997. Although butter stocks were 29 percent higher than a year ago, year ago stocks were very low. Butter stocks are not burdensome and butter prices have been above year ago levels for the last quarter of 1997.

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Table 1: The Price of 40 Pound Cheddar Cheese Blocks and the BFP and All Milk Prices, 1996 and 1997

Month	1996 40# Cheddar Price/Lb.	1997 40# Cheddar Price/Lb.	1996 BFP/Cwt.	1997 BFP/Cwt.
Jan	\$1.3788	\$1.2705	\$12.73	\$11.94
Feb	1.3775	1.3124	12.59	12.46
Mar	1.3874	1.3234	12.70	12.49
Apr	1.4325	1.2378	13.09	11.44
May	1.4925	1.1588	13.77	10.70
Jun	1.4933	1.1583	13.92	10.74
Jul	1.5623	1.2244	14.49	11.86
Aug	1.6358	1.3705	14.94	12.07
Sept	1.6942	1.3925	15.37	12.79
Oct	1.5793	1.3951	14.13	12.83
Nov	1.3245	1.4225	11.61	12.96
Dec	1.2373	1.4300	11.34	13.29
Average BFP Price			13.39	12.05
Average All Milk Price			14.71	13.25

Source: USDA, Dairy Market News, various issues

Table 2: Retail Prices of All Foods and Dairy Products, 1997 vs. 1996, Percent Change

Item	January	July	Dec
All Food	3.6	2.5	1.7
All Dairy Products	8.4	0.9	-0.5
Whole Milk	8.2	-1.3	-1.7
Cheese	7.0	2.4	-1.2
Meat/Poultry/Fish	4.8	3.0	-1.1

Source: USDA, Dairy Market News, various issues

Table 3: Stocks of Dairy Products, December 31, 1997 vs. 1996  
(Million Pounds)

Product	1997	1996	Percent Change
Butter	18	14	29%
Natural American Cheese	414	380	9%
Nonfat Dry Milk*	122	50	144%

Source: USDA, Dairy Market News, various issues.

\* November 31 stocks

In summary, 1997 ended with the milk supply demand situation in good balance and relatively good farm level milk prices. Average milk per cow was 16,916 pounds, 2.7 percent more than 1996 (Table 4). Milk cow numbers averaged 9.258 million head, down 1.1 percent from 1996. Total milk production was 156.603 billion pounds, up 1.5 percent from 1996. Commercial disappearance is estimated at 156.6 billion pounds, an increase of 1.0 percent from the 1996 level.

While the U.S. ended the year with milk cow numbers down just 1.1 percent, milk per cow up 2.7 percent and total milk production up 1.5 percent, Wisconsin did not do as well. Wisconsin experienced a 3.9 percent decline in milk cow numbers which was offset by 3.9 percent more milk per cow, thus, no increase in total milk production. Wisconsin continues to

undergo a major structural change in its dairy farm sector with many more dairy farmers exiting than entering.

Table 4: Milk cows, milk per cow, total milk production and total commercial disappearance, 1995, 1996 and 1997

	1995	1996	Percent Change From 1995	1997	Percent Change From 1996
Number of cows (1,000)	9,458	9,361	-1.0	9,258	-1.1
Pounds of Milk Per Cow	16,433	16,479	0.3	16,916	2.7
Total Milk Production (Billion Lbs.)	154.425	154.259	-0.7	156.603	1.5
Commercial Disappearance (Billion Lbs.)	154.8	155.1	1.9	156.6	1.0

Source: USDA, Dairy Market News, various issues

#### Outlook for 1998:

The dairy situation looks favorable for 1998. Most predict that farm level milk prices will average as high as, if not higher than 1997 averages. The milk supply and demand appears to support relatively strong prices.

Total milk production is forecasted to increase more than 1 percent. The number of milk cows will continue to decline as some farmers voluntarily exit, but improved milk prices and lower feed costs should slow the decline from that of 1997. A decline of around 0.8 percent seems reasonable. The price of cull milk cows will not be at a level to encourage more than normal culling, especially with stronger milk prices and adequate feed supplies. The price of cull cows is projected to be in the high \$30 to low \$40 per hundredweight range. Prices in the high \$40 to low \$50 range often encourages more strict culling.

The increase in milk per cow is projected to increase about 2 percent. The milk-feed price ratio may average near 1.7 compared to an average of 1.62 for 1997 and 1.59 for 1996. This ratio compares the value of 100 pounds of 16 percent dairy concentrate ration to the per hundredweight value of milk. A ratio of 1.7 or higher is favorable to increased concentrate feeding. The expected relatively strong milk prices and lower grain prices explain this higher ratio. The only negative feed factor for the first half of 1998 is stocks of high quality hay. Hay stocks are adequate, but stocks of high quality dairy hay are tight and prices are 15 to 30 percent higher than a year ago in many areas. Nevertheless, dairy farmers will manage these tighter stocks and feed alternative forages, thus minimizing the impact on milk production. By spring and early summer the new hay crop will be available. But if winterkill of alfalfa hay is prevalent or spring weather is adverse to harvesting good quality hay, then hay prices will stay relatively high for the year. Weather is a key factor in feed supplies, cost of feed and in milk production per cow as well as total milk production.

Imports of dairy products are likely to stay at recent year's level, about 2.9 billion pounds of milk equivalent. Cheese is the only dairy product imported by the U.S. in significant quantities. U.S. imports of cheese in 1998 will be equivalent to about 4.1 percent of domestic consumption---essentially the same as in 1997. Tariff rate quotas negotiated by the U.S. in the Uruguay Round GATT agreement will prevent any major increase in U.S. imports of cheese

and other dairy products for the next several years. In particular, cheese imports will rise to no more than about 5 percent of domestic consumption under the current Uruguay Round GATT agreement.

Commercial disappearance of milk and dairy products also looks favorable for 1998. The growth in the economy and consumer disposable incomes will be a positive factor for increased sales. Retail prices are expected to increase around 1 percent compared to 2 to 3 percent for all foods. Exports are likely to increase some, the result of DEIP activity. Exports of about 5 billion pounds of milk equivalent can be expected. In summary, an increase in total commercial disappearance of 1.4 percent for 1998 seems reasonable.

Table 5 summarizes the supply and demand situation for 1998.

Table 5: Number of Milk Cows, Milk Per Cow, Total Milk Production, and Total Commercial Disappearance, 1997 with Estimates for 1998

	1997	1998 Estimate	Percent Change
Number of Milk Cows (1,000)	9,258	9,183	-0.8
Pounds of Milk Per Cow	16,916	17,254	2.0
Total Milk Production (Billion Lbs.)	156.603	158.44	1.2
Total Commercial Disappearance (Billion Lbs.)	156.6	158.8	1.4

Source: 1997 numbers from USDA, Dairy Situation; 1998 estimates are the author's.

In summary, the supply and demand situation for 1998 points to slightly higher farm level milk prices (Table 6). The BFP will stay well above 1997 levels the first half of the year. Due to burdensome cheese stocks and sluggish cheese sales the BFP dropped to a low level of \$10.70 per hundredweight May 1997. With stocks in much better balance and relatively good cheese sales, the low for the BFP in 1998 is projected at \$11.80 per hundredweight in May. But with better milk prices, and if the weather and crops are favorable this summer and fall, we can expect milk production to be favorable which could hold the BFP below 1997 levels during September through December. The BFP is projected to peak at \$12.80 per hundredweight in October compared to a peak of \$13.29 per hundredweight in December of 1997. But because prices will not fall to the low levels of 1997 during the first half of the year, milk prices are projected to average higher than 1997. The average BFP for the year is projected at \$12.47 per hundredweight, \$0.42 higher than 1997, and the average all milk price is projected at \$13.75 per hundredweight, \$0.37 higher than 1997.

These price predictions assume that the U.S. Secretary of Agriculture Dan Glickman will not implement the proposed flooring of the BFP at \$13.50 for Class I and Class II pricing. If the \$13.50 BFP floor is implemented, than cheese prices are likely to decline due to some increased milk production. As a result, lower cheese prices would lower the average BFP for the year. Average milk prices would be lower for major manufacturing milk utilization areas, like the Upper Midwest and Northwest, as the result.

Table 6: Cheese Prices, the BFP and the All Milk Price for 1997 and Estimates for 1998

Month	1997 40# Cheddar Cheese Price/Lb.	1997 BFP/Cwt.	1998 40# Cheddar Cheese Price/Lb.	1998 BFP/Cwt.
Jan	\$1.2705	\$11.94	\$1.43	\$13.26
Feb	1.3124	12.46	1.41	13.33
Mar	1.3234	12.49	1.34	12.50
Apr	1.2378	11.44	1.31	12.00
May	1.1588	10.70	1.29	11.80
Jun	1.1583	10.74	1.31	12.00
Jul	1.2244	11.86	1.33	12.20
Aug	1.3705	12.07	1.34	12.30
Sep	1.3925	12.79	1.37	12.60
Oct	1.3951	12.83	1.39	12.80
Nov	1.4225	12.96	1.38	12.70
Dec	1.4300	13.29	1.33	12.20
Average BFP Price/Cwt.		12.05		12.47
Average All Milk Price/Cwt.		13.38		13.75

Source: For 1997, USDA, Dairy Market News, various issues; 1998 author's estimates.

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The views expressed are those of the author(s). Comments are welcome and should be sent to: Marketing and Policy Briefing Paper, Department of Agricultural and Applied Economics, University of Wisconsin-Madison, Madison, WI 53706.