



# Dairy Outlook

October 2009

**By Jim Dunn**

**Professor of Agricultural Economics, Penn State University**

## **Market Psychology**

Milk prices continue to increase as the higher futures market prices are no longer edging away each month. The cheese market has risen from \$1.11 in July to over \$1.45. . As may be seen in Table 1, Class III futures are over \$14.60 for December and \$15.00 for March, 2010. The remainder of 2010 is over \$15.00. This translates to a PA all-milk price over \$17.00 by December and over \$18.00 for late 2010, a vast improvement over the 2009 low of \$12.90. The Class I mover for October is up \$1.40 over September, which is another sign of stronger markets.

The U.S. dollar has been falling steadily, which makes U.S. exports more competitive. Also lower milk production is helping to raise prices. All the major products are up this month, with NFDM and butter continuing the strength from last month. Nonfat Dry Milk is up \$0.28 cents this month to \$1.32 per pound, a dramatic move. The decrease in production in California is an important factor here. Butter is \$1.31/lb., up \$0.04 from last month. Whey products are up once again, with whey protein concentrate continuing a slow climb, and whey powder edging up somewhat. Cheddar cheese had hit \$1.50, but has since softened to \$1.44. Even this value is \$0.08 above last month. Stocks of cheddar cheese and NFDM remain high, although both fell slightly in the last month.

Cheese exports fell in August, although the drop in the dollar has been greatest since this data period. Exports of whey protein concentrate have slipped slightly, but are still similar to last year. In total the value of dairy exports rose in August but the month to month increase was less. We are still way behind last year.

## **Corn and Soybean Markets**

Harvest problems, higher oil prices, and the weaker dollar are all fueling increases in corn and soybeans. In the last month corn futures have climbed steadily, now almost \$4.00 for the December 2009 contract. The harvest is running late for both corn and soybeans, with corn harvest 29% and soybeans 42% behind the five year average. Both crops are in better condition than last year. Soybean markets are up \$1.00 per bushel in the same period.

## **Income over feed costs**



The decrease in feed prices and higher milk prices raised September producer margins by \$0.34 per cow per day. Our index of Income Over Feed Costs (IOFC) reflects gross income less feed costs for an average cow producing 65 pounds of milk. As may be seen in Figure 1 and Table 2, the August value is at \$5.17. The October value will be higher with the higher milk prices and higher yet in the remainder of the fall, although the higher feed prices will erode this value if they persist

The allocation of the revenue per hundred pounds of milk is shown in Table 3. This value, the milk margin, is the estimated amount from the Pennsylvania all milk price that remains after feed costs are paid. As with income over feed cost, this measure shows that September was better than August. The improvement was all the result of a higher milk price. Feed costs are the same as in August. The forecast higher milk prices will help this measure in coming months as well.

### **Milk Production**

Monthly milk production numbers (Figure 2) have dropped well below last year, which is helping fuel the price recovery. There are 197,000 fewer cows than a year earlier, 28,000 more than a month ago. California and Arizona are culling and milk production in those states is well below September of last year. Since California is the biggest dairy producer, the decrease in national milk production reflects actions there. California's herd size has decreased by 4% over September on 2008, compared to a 1% decrease in Pennsylvania. With continued culling and a weaker dollar, perhaps exports can improve, which would do wonders for decreasing the inventories of dairy products.

## PA Dairy Income over Feed Costs

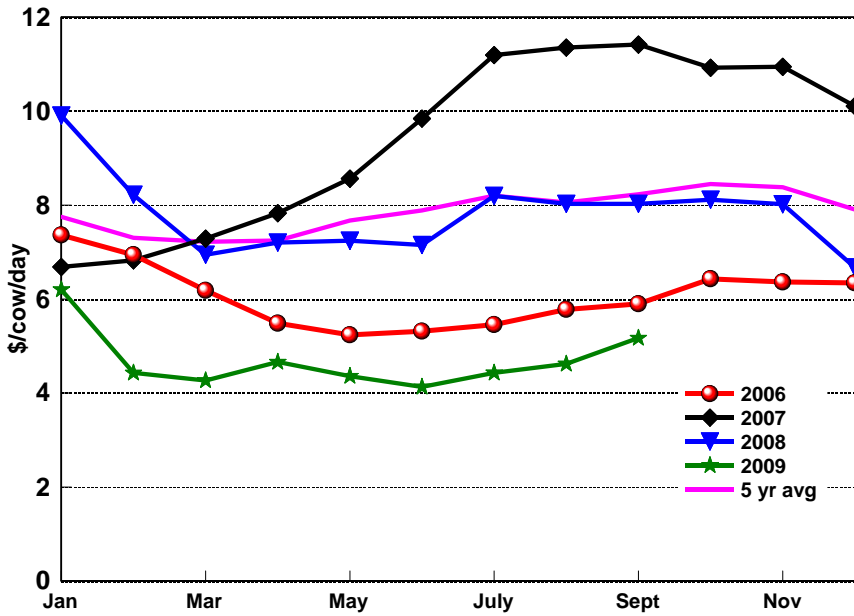


Figure 1. PSU's Income Over Feed Costs (IOFC)

## Milk Production

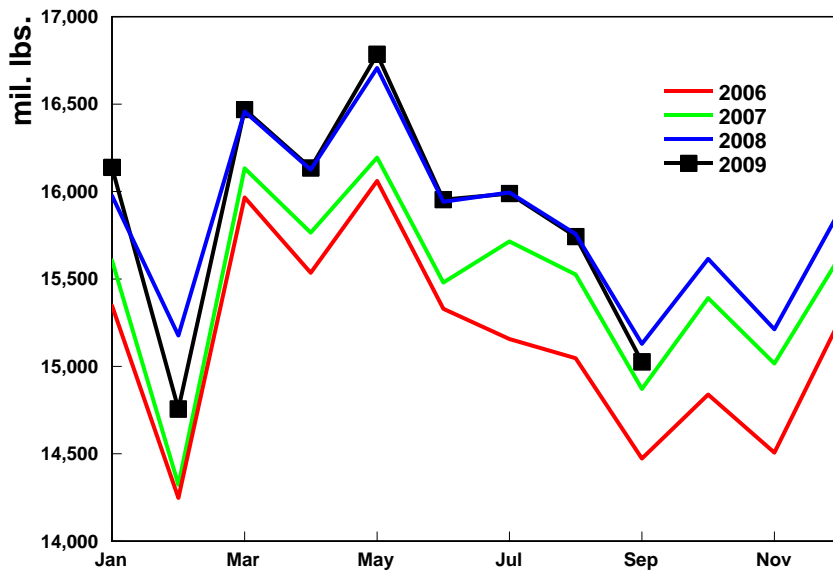


Figure 2: U.S. Milk Production (source USDA)



Table 1. Implied Milk Prices and Futures Prices for 2009

(Based on futures prices of October 21, 2009)

	Class III	Class IV	PA All Milk		Class III	Class IV	PA All Milk
	\$/cwt	\$/cwt	\$/cwt		\$/cwt	\$/cwt	\$/cwt
2008				2010			
Jan	19.32	16.29	22.60	Jan	14.67	13.36	17.30
Feb	17.03	14.67	21.00	Feb	14.74	13.49	17.39
Mar	18.00	14.17	19.10	Mar	15.00	13.37	17.50
Apr	16.76	14.56	19.90	Apr	15.08	13.37	17.55
May	18.18	15.26	19.50	May	15.10	13.46	17.59
Jun	20.24	15.92	20.30	Jun	15.14	13.71	17.71
Jul	18.25	16.60	21.40	Jul	15.35	13.91	17.90
Aug	17.32	16.64	20.50	Aug	15.53	13.96	18.02
Sep	16.28	15.45	20.50	Sep	15.69	13.96	18.12
Oct	17.06	13.62	19.40	Oct	15.55	14.21	18.13
Nov	15.51	12.25	19.20	Nov	15.62	14.21	18.17
Dec	15.28	10.35	17.10	Dec	15.69	14.31	18.25
Annual	17.44	14.65	20.04	Annual	15.26	13.78	17.80
				Annual change	3.97	3.13	3.47
				% change	35.1%	29.4%	24.2%
2009							
Jan	10.78	9.59	16.20				
Feb	9.31	9.45	13.50				
Mar	10.44	9.64	13.00				
Apr	10.78	9.82	13.40				
May	9.84	10.14	13.40				
Jun	9.97	10.22	12.90				
Jul	9.97	10.15	13.00				
Aug	11.20	10.38	13.30				
Sep	12.11	11.15	14.10				
Oct	12.75	11.60	15.54				
Nov	13.78	12.38	16.43				
Dec	14.64	13.23	17.24				
Annual	11.30	10.65	14.33				
Annual change	-6.14	-4.00	-5.71				
% change	-35.2%	-27.3%	-28.5%				

Table 2: Determinants of PA income over feed cost

	all milk price	feed cost/65 lbs milk	Income over feed cost
Jan-08	\$22.60	\$4.79	\$9.90
Feb-08	\$21.00	\$5.43	\$8.22
Mar-08	\$19.10	\$5.47	\$6.94
Apr-08	\$19.90	\$5.73	\$7.20
May-08	\$19.50	\$5.43	\$7.24
Jun-08	\$20.30	\$6.04	\$7.15
Jul-08	\$21.40	\$5.71	\$8.20
Aug-08	\$20.50	\$5.30	\$8.03
Sep-08	\$20.50	\$5.30	\$8.03
Oct-08	\$19.40	\$4.49	\$8.12
Nov-08	\$19.20	\$4.46	\$8.02
Dec-08	\$17.10	\$4.44	\$6.67
Jan-09	\$16.20	\$4.33	\$6.20
Feb-09	\$13.50	\$4.35	\$4.43
Mar-09	\$13.00	\$4.18	\$4.27
Apr-09	\$13.40	\$4.05	\$4.66
May-09	\$13.40	\$4.35	\$4.36
Jun-09	\$12.90	\$4.25	\$4.13
Jul-09	\$13.00	\$4.02	\$4.43
Aug-09	\$13.30	\$4.01	\$4.63
Sep-09	\$14.10	\$3.99	\$5.17

Table 3: Milk Margin (Portion of milk price going to feed and portion remaining for other expenses)

	All milk price/100 lbs	Feed cost/100 lbs milk	Milk margin/100 lbs
Jan-08	\$22.60	\$7.36	\$15.24
Feb-08	\$21.00	\$8.36	\$12.64
Mar-08	\$19.10	\$8.42	\$10.68
Apr-08	\$19.90	\$8.82	\$11.08
May-08	\$19.50	\$8.36	\$11.14
Jun-08	\$20.30	\$9.30	\$11.00
Jul-08	\$21.40	\$8.79	\$12.61
Aug-08	\$20.50	\$8.15	\$12.35
Sep-08	\$20.50	\$8.15	\$12.35
Oct-08	\$19.40	\$6.92	\$12.48
Nov-08	\$19.20	\$6.87	\$12.33
Dec-08	\$17.10	\$6.83	\$10.27
Jan-09	\$16.20	\$6.66	\$9.54

Feb-09	\$13.50	\$6.69	\$6.81
Mar-09	\$13.00	\$6.44	\$6.56
Apr-09	\$13.40	\$6.23	\$7.17
May-09	\$13.40	\$6.70	\$6.70
Jun-09	\$12.90	\$6.54	\$6.36
Jul-09	\$13.00	\$6.18	\$6.82
Aug-09	\$13.30	\$6.17	\$7.13
Sep-09	\$14.10	\$6.14	\$7.96

### A Longer Run View – Per Capita Cheese Consumption

The figure below shows per capita cheese consumption for 1989 to 2007. It shows clearly that consumption of American cheese has increased slightly, while the consumption of other cheeses has grown steadily. This is a continuation of a longer trend. Starting in the 1960s, pizza consumption revolutionized cheese consumption. If the non-American category is broken down, most of the growth is still in Italian cheeses. The 2008 data would show a decrease in this category, presumably because the recession has decreased food away from home. Pizza consumption has probably peaked or at a minimum has slowed considerably, but the Food and Agricultural Policy Research Institute forecasts a 1.3% per year growth until 2017. This is very important because per capita consumption of other dairy products is not growing.

## Per Capita Cheese Consumption 1989-2007

