

## Overview

*Many of the key dairy market statistics reported for March and April indicated that milk prices for U.S. dairy farmers are on the road to improvement. Among them were a rise in the national average all-milk price in March, higher prices in April for the four dairy products that underpin the overall milk price structure in the United States, stronger domestic consumption, surging exports, and a reduction in previously excessive stocks of those key dairy products. There were some continuing negative indicators, as well, including an almost 2 percent rise in total milk solids production during the first quarter and a drop of \$0.11 in the monthly margin – due to higher feed costs – under the Margin Protection Program (MPP) from February, to \$6.77/cwt. in March.*

## Commercial Use of Dairy Products

Domestic commercial use of milk in all products showed a bit more robust growth compared to recent months during the first quarter of 2018, with particular strength in butter and other than American-type cheese. Total domestic sales of fluid milk products have decreased at a generally consistent rate of close to 2 percent per year since last summer. Expanded exports of skim milk powder continue to draw product away from the domestic market.

## U.S. Dairy Trade

U.S. dairy exports continue to surge. February exports were the equivalent of 17.2 percent of domestic milk solids production,

the highest ever for the month of February. March exports were the second highest ever for the month of March, at 17.3 percent of domestic solids production. Double-digit increases were reported for all products reported here during the first quarter of 2018, particularly the large-volume ingredient categories of nonfat dry milk/skim milk powder, dry whey, whey protein concentrate, and lactose.

During the first quarter of 2018, the major import volume categories of cheese and proteins extended their continuing decline to almost one year. While butter imports bounced up a bit during the quarter, after retreating since last fall, the overall U.S. dairy trade surplus grew to its highest level since a few months during 2013-2014. The U.S. dairy trade balance – exports minus imports – has

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Domestic Commercial Use	Jan–Mar 2018	Jan–Mar 2017	2017–2018 Change	Percent Change
	(million pounds)			
Total Fluid Milk Products	12,052	12,280	-228	-1.9%
Butter	433	413	20	4.8%
American-type Cheese	1,208	1,189	19	1.6%
All Other Cheese	1,799	1,735	63	3.7%
Nonfat Dry Milk / Skim Milk Powders	243	260	-17	-6.5%
All Products (milk equiv., milkfat basis)	50,031	49,578	453	0.9%
All Products (milk equiv., skim solids basis)	44,407	44,285	122	0.3%

### U.S. Dairy Trade *from page 1*

expanded from the equivalent of 10.3 percent of domestic milk solids production during the first quarter of 2017, to 13.0 percent a year later. Without this change, an additional 2.7 percent of U.S. milk solids production would have been sold in the domestic market, weakening prices. Instead, this improvement in the U.S. dairy trade balance has been an important contributor to the improving domestic milk price outlook.

## Milk Production

Expansion of the nation's dairy cow herd is slowing. Throughout 2017, the year-over-year growth rate of cow numbers swelled from 0.6 percent to 0.8 percent then receded back down to 0.5 percent. It dropped further to 0.4 percent during the first quarter of 2018. Over the same period, growth in milk production per cow dipped to as low as 0.4 percent year-over-year but returned

back above 1 percent during the first quarter. Growth in milk production remained below 2 percent during most of the year, on a moving three-month average basis. Annual growth in milk solids production has been running 0.4 percent above the rate of annual milk production growth at the beginning of 2018. Individual states in which the rate of milk production has risen in recent months, compared with most of 2017, include California, Idaho, Washington and Colorado. The opposite trend occurred in New York, Michigan, Minnesota, Ohio and Vermont.

## Dairy Products

Production of both mozzarella cheese and total Italian-type cheese, of which mozzarella represents about three-quarters, increased by almost 4 percent from a year ago during the first quarter of 2018. Cheddar cheese is the flagship variety for the American-type cheese category and it also represents

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U.S. Dairy Exports	Jan–Mar 2018	Jan–Mar 2017	2017–2018 Change	Percent Change
		(metric tons)		
Butter	6,027	3,901	2,126	55%
Anhydrous Milk Fat/Butteroil	2,175	1,075	1,100	102%
Cheddar Cheese	14,299	9,341	4,958	53%
American-type Cheese	14,397	9,433	4,963	53%
Total Cheese	88,940	80,163	8,777	11%
Nonfat Dry Milk/Skim Milk Powder	182,269	148,124	34,145	23%
Whole Milk Powder	10,619	6,563	4,056	62%
Dry Whey	94,296	83,807	10,490	13%
Whey Protein Concentrate/Isolate	53,608	45,147	8,461	19%
Lactose	102,290	87,061	15,229	17%
Percent of Milk Solids Exported	16.1%	13.9%	2.2%	16%

U.S. Dairy Imports	Jan–Mar 2018	Jan–Mar 2017	2017–2018 Change	Percent Change
		(metric tons)		
Butter	6,005	5,498	506	9%
Cheese	38,867	42,331	-3,464	-8%
Nonfat Dry Milk/Skim Milk Powder	151	30	121	403%
MPC (all protein levels)	16,391	17,336	-945	-5%
Casein	14,293	17,883	-3,589	-20%
Percent of Milk Solids Imported	3.1%	3.6%	-0.5%	-15%

**Dairy Products** *from page 2*

approximately three-quarters of that broader category. However, growth of this key variety and its larger category diverged significantly during the first quarter. The difference was due to a 9.5 percent reported growth for other American cheese types during the first quarter. These consist of “Colby & Jack & Monterey,” according to the USDA/NASS descriptor.

## Dairy Product Inventories

Evolution of supply chains for the key dairy products has led to a general increase in “normal” stock levels, based on observations

during periods of both surplus and shortage of those products. For example, the norm for nonfat dry milk stocks has increased gradually to average about 39 days of total use for nonfat dry milk and skim milk powder. However, actual stocks were as high as three weeks above this level last fall, but have since fallen steadily to just above it as of March, as expanded U.S. exports have effectively drawn down surplus inventories. As a result, excess production and stocks outside the United States, together with Canada’s Class 7-fueled exports, are now solely responsible for the product’s continuing depressed price, as the United States is no longer a significant contributor to the problem.

Milk and Dairy Products Production	Jan–Mar 2018	Jan–Mar 2017	2017–2018 Change	Percent Change
<b>Milk Production</b>				
Cows (1,000 head)	9,408	9,369	39	0.4%
Per Cow (pounds)	5,781	5,717	64	1.1%
Total Milk (million pounds)	54,385	53,562	823	1.5%
Total Milk Solids (million pounds)	7,010	6,877	133	1.9%
<b>Dairy Products Production</b>				
		(million pounds)		
<b>Cheese</b>				
American Types	1,268	1,254	14	1.1%
Cheddar	926	942	-16	-1.7%
Italian Types	1,382	1,331	52	3.9%
Mozzarella	1,066	1,029	37	3.6%
Total Cheese	3,183	3,094	89	2.9%
Butter	538	516	22	4.2%
<b>Dry Milk Products</b>				
Nonfat Dry Milk	498	458	40	8.8%
Skim Milk Powder	124	150	-25	-16.9%
Dry Whey	268	247	21	8.6%
Whey Protein Concentrate	126	119	8	6.4%
<b>Dairy Product Inventories</b>	<b>Mar 2018</b>	<b>Feb 2018</b>	<b>Mar 2017</b>	<b>2017–2018 Change</b>
		(million pounds)		
Butter	274	266	273	0%
American Cheese	769	763	773	0%
Other Cheese	558	555	490	14%
Nonfat Dry Milk	298	298	246	21%

## Dairy Product and Federal Order Class Prices

The prices of the four basic dairy commodities reported by USDA/AMS were all up in April over the month before, the first time this has occurred since December 2016. Federal order class prices experienced a similar increase in April, even those with partially or fully lagged components. These moves were part of the general strengthening of numerous milk price indicators, current as well as futures-based, that point to February–March as the likely low point of what had been a very lackluster outlook for milk prices this year. Among such indicators has been an increase of more than \$0.35 a pound in the daily CME spot market price for barrel cheese from mid-January to mid-May.

U.S. average retail prices for fluid whole milk in March were down by 12 percent from the beginning of 2017, while those for natural Cheddar cheese were up by 6 percent from their recent low in May 2017, according to statistics from the U.S. Bureau of Labor Statistics.

## Milk and Feed Prices

The all-milk price rose \$0.30/cwt. from February to March, another indicator of an improving milk price outlook. But increases in all three feed cost components of the MPP feed cost formula boosted that index by \$0.41/cwt. at the same time. The February and March MPP margins are such that milk enrolled in the program for all 12 months of 2018 at the lower, Tier One premium rate for

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Dairy Product and Federal Order Prices	Apr 2018	Mar 2018	Apr 2017	2017–2018 Change
<b>AMS Commodity Prices</b>		(per pound)		
Butter	\$2.245	\$2.176	\$2.116	\$0.129
Cheese	\$1.574	\$1.554	\$1.496	\$0.078
Nonfat Dry Milk	\$0.713	\$0.696	\$0.839	-\$0.125
Dry Whey	\$0.259	\$0.253	\$0.524	-\$0.265
<b>Class Prices for Milk</b>		(per hundredweight)		
Class I Mover	\$14.10	\$13.36	\$16.05	-\$1.95
Class III	\$14.47	\$14.22	\$15.22	-\$0.75
Class IV	\$13.48	\$13.04	\$14.01	-\$0.53
<b>Retail Dairy Product Prices</b>				
Fluid Milk (per gallon)	\$2.924	\$2.903	\$3.259	-\$0.335
Cheddar Cheese (per pound)	\$5.030	\$5.064	\$4.794	\$0.236

Milk and Feed Prices	Mar 2018	Feb 2018	Mar 2017	2017–2018 Change
<b>Producer Prices</b>				
All Milk (per cwt.)	\$15.60	\$15.30	\$17.30	-\$1.70
<b>Feed Prices</b>				
Corn (per bushel)	\$3.51	\$3.38	\$3.49	\$0.02
Soybean Meal (per ton)	\$380	\$363	\$320	\$60
Alfalfa Hay (per ton)	\$166	\$155	\$135	\$31
2014 Farm Bill Feed Cost (per cwt.)	\$8.83	\$8.42	\$7.95	\$0.88
2014 Farm Bill Margin (per cwt.)	\$6.77	\$6.88	\$9.35	-\$2.58

### **Milk and Feed Prices** *from page 4*

the first 5 million pounds of covered milk production, will receive a positive return above the cost of premiums and fees for coverage at the \$8.00 margin level, even in the unlikely event that no other payments occur for the remainder of the year. Producers have until June 1 to sign up to participate in the program during 2018.

## **Looking Ahead**

From June 2017 through April this year, USDA had steadily dropped its monthly forecasts for the national average milk

price during all of 2018, by a total of \$2.75/cwt. With its May forecast, however, the department abruptly reversed course with a forecast whose midpoint of the range was up by \$0.60/cwt. from a month earlier. By mid-May, the CME dairy futures were indicating the U.S. average all-milk price would be about \$17.05/cwt., another \$0.60/cwt. above USDA's May forecast midpoint. USDA's May update also reduced its outlook for 2018 milk production by 300 million pounds, and it began forecasting 2019 U.S. milk production at 1.3 percent over 2018 production. This would indicate that the Department expects U.S. milk production growth to continue to slow over the next year couple of years.

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The **National Milk Producers Federation (NMPF)** is a farm commodity organization representing most of the dairy marketing cooperatives serving the U.S.