

## Overview

*Increased production per cow and expectations for additional milk production growth is dampening the outlook for milk prices for the remainder of 2016. Spot market prices for Cheddar cheese are under pressure from rising inventories, and this will soon be reflected in the USDA/AMS dairy product price survey and in Federal Order Class III prices. Nonfat dry milk and dry whey prices remain in line with world market-driven, depressed levels, although butter prices continue to hold at around \$2 a pound. These anticipated low milk prices and the recent rally in grain prices during the spring planting and growing season have combined to push projections for the dairy-income-over-feed-cost margin to its lowest levels since 2013. USDA's NMPF decision tool for the Margin Protection Program (MPP) now indicates that the MPP margin may fall below \$6.00 per hundredweight for the May-June period.*

## Commercial Use of Dairy Products

Following a year-over-year drop of more than 3% in January, fluid milk sales during February were 1.3% below a year earlier, on a leap-year adjusted basis. That's the same as in December, and it reduced fluid sales by 1.9% from a year earlier for December 2015 – February 2016. Commercial use of cheese in the United States grew more strongly during February, particularly for types other than American cheese. However, the arrival of grilling season promises to pick up the pace for American cheese. On a percentage basis, increases in domestic use of milk in all products during the three-month period barely kept ahead of milk production growth for milkfat, while growth in skim solids use, at 0.7% per year, did not keep up with milk production.

## U.S. Dairy Trade

U.S. exports during the first quarter of 2016 were equivalent to 12.6% of milk solids production, down from 13.4% during the first quarter of 2015. However, the numbers were higher a year ago partly due to the shipment of products backlogged during the West Coast dock strike, which was settled in February 2015. Exports of most major product categories are still down for the quarter, with a few showing small increases. An exception was anhydrous milkfat, exports of which are already more than 50% higher than for all of 2015. AMF exports go almost entirely to Mexico.

Butter imports during the quarter were 90% above a year earlier and cheese imports were up by a third, while milk protein concentrates

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Domestic Commercial Use	Dec 2015–Feb 2016	Dec 2014–Feb 2015	2014–2015 Change	Percent Change*
	(million pounds)			
Total Fluid Milk Products	12,655	12,764	-109	-1.9%
Butter	425	431	-7	-2.6%
American-type Cheese	1,140	1,108	33	1.8%
All Other Cheese	1,761	1,615	146	7.8%
Nonfat Dry Milk/Skim Milk Powders	262	347	-85	-25.4%
All Products (milk equiv., milkfat basis)	49,241	48,166	1,075	1.1%
All Products (milk equiv., skim solids basis)	44,349	43,569	780	0.7%

\*Adjusted for calendar composition

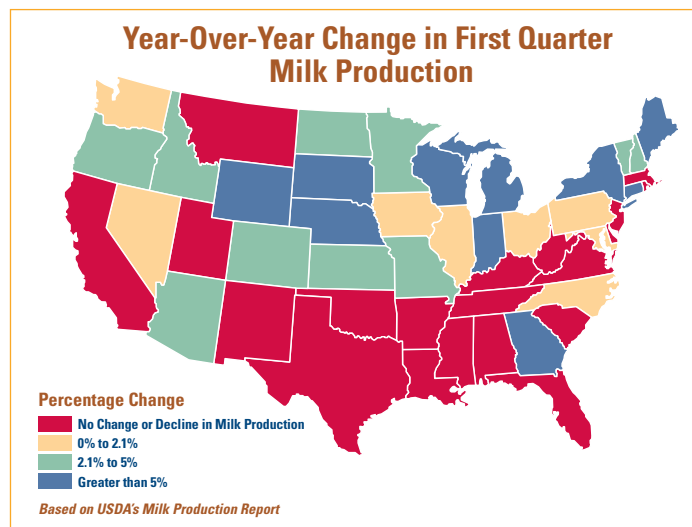
**U.S. Dairy Trade** *from page 1*

and casein imports were up by single-digit percentages. These rates of increase are roughly proportionate to the U.S.–world market price gaps for milkfat, cheese and dairy proteins. Total imports were equivalent to just 4% of milk solids production during the quarter. Since 2000, dairy product imports have averaged approximately 3.8% of domestic solids production, but reached as high as 5.4% at the beginning of 2006.

## Milk Production

Milk production was 2.1% higher during the first quarter of 2016 compared with 2015. When adjusted for leap year, U.S. milk production was up 1.0%. The increase was due mostly to increased production per cow, as well as increased cow numbers. The adjusted rates of increase accelerated markedly during the quarter. Production was up just 0.2% in January, approximately

1% in February and 1.8% in March. The March rate was the highest since May 2015. While milk production is growing nationally, regionally milk production growth rates differ considerably,



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U.S. Dairy Exports	Jan–Mar 2016	Jan–Feb 2015	2015–2016 Change	Percent Change*
		(metric tons)		
Butter	2,688	5,435	-2,747	-51%
Anhydrous Milk Fat/Butteroil	7,067	2,106	4,961	232%
Cheddar Cheese	8,701	10,712	-2,011	-20%
American-type Cheese	8,874	10,976	-2,102	-20%
Total Cheese	71,829	87,647	-15,819	-19%
Nonfat Dry Milk/Skim Milk Powder	125,425	125,580	-155	-1%
Whole Milk Powder	6,589	11,602	-5,013	-44%
Dry Whey	67,973	74,343	-6,371	-10%
Whey Protein Concentrate/Isolate	33,599	30,653	2,946	8%
Lactose	84,930	82,385	2,545	2%
Percent of Milk Solids Exported	12.6%	13.4%	-0.8%	-7%

\*Adjusted for calendar composition

U.S. Dairy Imports	Jan–Mar 2016	Jan–Mar 2015	2015–2016 Change	Percent Change*
		(metric tons)		
Butter	7,662	3,978	3,684	90%
Cheese	54,127	40,680	13,447	32%
Nonfat Dry Milk/Skim Milk Powder	84	278	-194	-70%
MPC (all protein levels)	16,336	15,192	1,145	6%
Casein	17,119	16,537	582	2%
Percent of Milk Solids Imported	4.0%	3.3%	0.7%	21%

\*Adjusted for calendar composition

### Milk Production *from page 2*

as shown in the chart below. The increasing rates of national production growth during the quarter was due to some states shifting from declining to growing production and to faster growth taking place in several states. USDA has increased its estimate of milk production growth for the full year 2016, from 1.2% in its March forecast to 1.5% in this month's forecast, adjusted for calendar composition.

## Dairy Products

Among the major dairy products, increased milk production appeared to be going mostly to Italian-type cheese and butter

during the first quarter. Production of American-type cheese was flat, while combined production of nonfat dry milk and skim milk powder was down, as was the combined production of dry whey and whey protein concentrate. Overall, increased butter production, together with lower domestic commercial use, lower exports and higher imports, are contributing to bearish supply-side expectations in the butter and milkfat category. However, continued buyer interest in butter at \$2 per pound has provided support against these fundamentals.

## Dairy Product Inventories

More butter was in cold storage at the end of March than a month earlier, but the gain was much smaller than the jump

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Milk & Dairy Products Production	Jan–Mar 2016	Jan–Mar 2015	2015–2016 Change	Percent Change*
<b>Milk Production</b>				
Cows (1000 head)	9,316	9,309	7	0.1%
Per Cow (pounds)	5,693	5,579	114	0.9%
Total Milk (million pounds)	53,038	51,936	1,102	1.0%
<b>Dairy Products Production</b>				
		(million pounds)		
<b>Cheese</b>				
American Types	1,167	1,156	12	-0.1%
Cheddar	839	847	-8	-2.0%
Italian Types	1,318	1,263	55	3.2%
Mozzarella	1,029	989	40	2.9%
Total Cheese	2,988	2,902	86	1.8%
Butter	532	497	35	5.8%
<b>Dry Milk Products</b>				
Nonfat Dry Milk	449	499	-51	-11.1%
Skim Milk Powder	132	114	18	14.7%
Dry Whey	242	240	2	-0.4%
Whey Protein Concentrate	114	124	-10	-9.3%

\*Adjusted for calendar composition

Dairy Product Inventories	Mar 2016	Feb 2016	Mar 2015	2015–2016 Change
		(million pounds)		
Butter	244	236	184	32%
American Cheese	726	716	634	14%
Other Cheese	465	466	434	7%
Nonfat Dry Milk	232	217	251	-7%

**Dairy Product Inventories** *from page 3*

from January to February. At 244 million pounds, March-ending butter stocks represented 42 days of total commercial use during that month, approximately the average for all months since January 2015, and down from 50 days at the end of February. By contrast, March–ending American cheese stocks represented 57 days of commercial use, the highest during since July 2013.

## Dairy Product and Federal Order Class Prices

Federal order dairy product prices for April were little changed from March for all four products in the USDA/AMS survey. April Class prices were all down by about \$0.10 per hundredweight or

less from a month earlier, but by much larger amounts from a year earlier. Federal order butterfat and protein prices provide yet another indicator of the unusual component price relationships in recent months. Since 2000, the monthly butterfat price has averaged approximately 70% of the protein price and has exceeded the protein price only about 10% of the time, generally by small amounts and for short periods. Since September, however, butterfat has topped protein by an average of 60%, and futures prices indicate this will continue through most of 2016.

## Milk and Feed Prices

The average all-milk price dropped 40 cents per hundredweight between February and March, the same as from January to February.

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Dairy Product and Federal Order Prices	Apr 2016	Mar 2016	Apr 2015	2015–2016 Change
<b>AMS Commodity Prices</b>		(per pound)		
Butter	\$2.019	\$1.991	\$1.736	\$0.284
Cheese	\$1.504	\$1.516	\$1.612	-\$0.108
Nonfat Dry Milk	\$0.731	\$0.752	\$0.968	-\$0.238
Dry Whey	\$0.247	\$0.248	\$0.461	-\$0.214
<b>Class Prices for Milk</b>		(per hundredweight)		
Class I Mover	\$13.74	\$13.78	\$15.50	-\$1.76
Class III	\$13.63	\$13.74	\$15.81	-\$2.18
Class IV	\$12.68	\$12.74	\$13.51	-\$0.83

Milk and Feed Prices	Mar 2016	Feb 2016	Mar 2015	2015–2016 Change
<b>Producer Prices</b>				
All Milk (per cwt.)	\$15.30	\$15.70	\$16.60	-\$1.30
<b>Feed Prices</b>				
Corn (per bushel)	\$3.57	\$3.57	\$3.81	-\$0.24
Soybean Meal (per ton)	\$276	\$274	\$358	-\$82
Alfalfa Hay (per ton)	\$144	\$142	\$169	-\$25
2014 Farm Bill Feed Cost (per cwt.)	\$7.83	\$7.79	\$9.03	-\$1.20
2014 Farm Bill Margin (per cwt.)	\$7.47	\$7.91	\$7.57	-\$0.10
<b>Retail Dairy Product Prices</b>				
Fluid Milk (per gallon)	\$3.187	\$3.230	\$3.463	-\$0.276
Cheddar Cheese (per pound)	\$5.364	\$5.369	\$5.384	-\$0.020

## Milk and Feed Prices *from page 4*

April federal order prices indicate the all-milk price will drop another 40 cents in April, to around \$14.90 per hundredweight. Based on current projections, the all-milk price could reach a low of \$14.40 by June. Increases in feed costs and lower milk prices have reduced the MPP margin back below \$8 per hundredweight to \$7.47 per hundredweight for March, the lowest margin since the program began in 2014. In mid-May, the USDA-MPP decision tool projected the bimonthly MPP margin would dip close to \$7 per hundredweight for the March – April period and then drop below \$6 per hundredweight for May – June. USDA has reduced its forecast of the average all-milk price for the full year 2016, from a mid-range estimate of \$15.25 per hundredweight in its April forecast to \$14.85 in this month's forecast.

Retail prices have gradually fallen for whole milk over the past year, according to the Bureau of Labor Statistics (BLS), but Cheddar cheese prices have remained essentially stable. Using March BLS retail prices and FMMO classified prices, the farmer share of the retail dollar was 43 percent and 23 percent for one gallon of whole milk and one pound of Cheddar cheese, respectively. These percentages are down only slightly from prior year levels.

## Final Comments

Milk prices are under pressure all over the world – the flip side of the situation during 2013-2014. U.S. milk prices, particularly protein prices, have not escaped this pressure. On average, however, U.S. dairy farmers have so far fared somewhat better than our European and Oceania counterparts because of stronger U.S. domestic cheese and butter prices. Increased milk production, however, is now putting further pressure on domestic cheese prices, leaving butter to shoulder more of the load of keeping national average milk prices in the United States above world levels. Recent commentary in the USDA/AMS Dairy Market News (DMN) tends to support the futures outlook that butter prices will stay above \$2 this year. DMN reports that, while butter inventories are indeed up, manufacturers are comfortable holding them, given their expectations of strong sales and potentially higher prices later in the year. DMN also noted that production of print butter, which is destined for sales and not storage, is increasing and that more cream is moving to Class II uses rather than to butter churns as ice cream season approaches.

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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.