

Overview

The key factors affecting the general dairy market outlook in recent months have been the slow unwinding of the previous expansion of milk and cheese production, increased domestic and export use of cheese and butter, and continued large stocks of these products. Cheese prices increased in August following a drop in July. The July U.S. average all-milk price remained unchanged from June at \$17.30 per hundredweight. Cheese prices have been the most variable component of milk pricing recently, with butter prices likely peaking and nonfat dry milk and dry whey prices steadily easing down. Slower production growth and increased domestic commercial use and exports of American-type cheese have contended with record stock levels to establish the basic market tone for cheese prices. A moderate increase in the monthly USDA Margin Protection Program (MPP) feed cost formula calculation reduced the MPP monthly margin in July, but left it still above \$9 per hundredweight.

Commercial Use of Dairy Products

Calculations by USDA's Economic Research Service show domestic consumption of American-type cheese was 6.6 percent higher during the second quarter of 2017 than a year earlier. This was the largest year-over-year increase for this category over a consecutive three-month period in more than two years. Increased production coupled with little net change in stocks over the period generated a significant increase in total consumption, with both exports and domestic use showing gains. Total fluid milk product sales were off by more than 2 percent, and estimated total milkfat use in the category was flat during the quarter. The difference between the growth rates of total milk consumption, measured

on a milkfat versus skim solids basis, was back at the relatively high levels it reached during the latter part of 2016.

U.S. Dairy Trade

U.S. exports of skim milk powder and dry whey continued to exceed year-ago levels during the May–July period, but their growth rates both dropped back to single-digit percentages following a year in double digits. Whey protein concentrate exports have dropped in recent months following double-digit growth during last year. Butter and cheese exports are continuing to show significant expansion this year following retrenchment for much of 2016.

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Domestic Commercial Use	Apr–Jun 2017	Apr–Jun 2016	2016–2017 Change	Percent Change
	(million pounds)			
Total Fluid Milk Products	11,648	11,915	-267	-2.2%
Butter	431	406	25	6.1%
American-type Cheese	1,216	1,141	76	6.6%
All Other Cheese	1,755	1,740	16	0.9%
Nonfat Dry Milk / Skim Milk Powders	242	344	-101	-29.4%
All Products (milk equiv., milkfat basis)	52,345	50,965	1,380	2.7%
All Products (milk equiv., skim solids basis)	45,242	46,210	-968	-2.1%

U.S. Dairy Trade *from page 1*

U.S. butter imports continued to rise from a year earlier during May–July, but cheese imports have steadily fallen below year-earlier levels for more than a year. Casein imports have been relatively constant since Fall 2016, while imports of milk protein concentrate have been more variable. They have generally declined during the spring months for the past two years but increased during the summer. The percentage of total U.S. milk solids production to which imports have been equivalent has fallen steadily since Fall 2016.

Milk Production

Monthly U.S. milk production compared to a year earlier was up by 1.8 percent in May, 1.6 percent in June, and 1.8 percent again in July, resulting in 1.7 percent production growth for the period. Growth rates from the prior year during the current episode of

increased production have generally diminished from month to month since first peaking at 2.6 percent in October 2016, but July was the third reversal of this general pattern. Net changes in growth rates of one percent or more in the two largest milk-producing states, California and Wisconsin, contributed to this pause. Continued easing of this production buildup is key to providing additional increases in milk prices going forward. Sizeable production increases stressed available manufacturing capacity in the Midwest and Northeast this spring, driving prices that plants paid well below the announced federal order class prices for significant volumes of milk.

Dairy Products

The year-over-year increase in American-type cheese production dropped below 4 percent, and Cheddar production fell below 5 percent, in the May–July period for the first time since last winter. Annual growth for both was above 6 percent in May but below

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U.S. Dairy Exports	May–Jul 2017	May–Jul 2016	2016–2017 Change	Percent Change
		(metric tons)		
Butter	5,645	2,416	3,228	134%
Anhydrous Milk Fat/Butteroil	1,713	461	1,251	271%
Cheddar Cheese	10,466	8,090	2,376	29%
American-type Cheese	10,553	8,186	2,367	29%
Total Cheese	93,204	70,900	22,304	31%
Nonfat Dry Milk/Skim Milk Powder	146,708	135,174	11,534	9%
Whole Milk Powder	4,864	8,126	-3,262	-40%
Dry Whey	88,572	83,936	4,635	6%
Whey Protein Concentrate/Isolate	41,490	49,140	-7,650	-16%
Lactose	84,675	91,280	-6,605	-7%
Percent of Milk Solids Exported	14.2%	14.4%	-0.2%	-1%

U.S. Dairy Imports	May–Jul 2017	May–Jul 2016	2016–2017 Change	Percent Change
		(metric tons)		
Butter	7,075	5,793	1,282	22%
Cheese	44,152	47,511	-3,359	-7%
Nonfat Dry Milk/Skim Milk Powder	38	109	-71	-65%
MPC (all protein levels)	11,644	14,093	-2,449	-17%
Casein	17,501	17,596	-95	-1%
Percent of Milk Solids Imported	3.4%	3.8%	-0.4%	-10%

Dairy Products *from page 2*

1 percent in July. July 2017 Cheddar production was the same as it was in July 2015. This sudden plunge in production growth, coupled with expanded commercial use, should begin to reduce the excess stocks that are currently troubling the markets. Skim milk powder production was down over last year during the quarter, despite continued growth in exports.

Dairy Product Inventories

Stocks of American-type cheese increased in July from a month earlier to just above their level in May, setting a new high since 1985. July-ending stocks represented almost 70 days of total

commercial use, at least two weeks above normal and the highest for this measure since at least 1995. July-ending stocks of other than American-type cheese were also the highest since at least 1995 in both volume and days of use, and nonfat dry milk stocks were highest in volume over that period.

Dairy Product and Federal Order Class Prices

The sharp rise of butter prices reported by USDA's Agricultural Marketing Service this summer slowed considerably in August, while August cheese prices bounced back from their July slump to top their June level. Prices for both nonfat dry milk and dry

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Milk and Dairy Products Production	May–Jul 2017	May–Jul 2016	2016–2017 Change	Percent Change
Milk Production				
Cows (1,000 head)	9,401	9,324	77	0.8%
Per Cow (pounds)	5,875	5,823	52	0.9%
Total Milk (million pounds)	55,232	54,292	940	1.7%
Dairy Products Production				
		(million pounds)		
Cheese				
American Types	1,232	1,195	36	3.0%
Cheddar	886	857	29	3.3%
Italian Types	1,352	1,325	27	2.1%
Mozzarella	1,053	1,034	19	1.8%
Total Cheese	3,112	3,026	86	2.8%
Butter	441	449	-8	-1.8%
Dry Milk Products				
Nonfat Dry Milk	480	464	17	3.6%
Skim Milk Powder	141	156	-14	-9.2%
Dry Whey	270	244	26	10.7%
Whey Protein Concentrate	125	116	9	8.1%

Dairy Product Inventories	Jul 2017	Jun 2017	Jul 2016	2016–2017 Change
		(million pounds)		
Butter	308	310	333	-8%
American Cheese	838	810	770	9%
Other Cheese	538	507	506	6%
Nonfat Dry Milk	299	296	257	16%

Dairy Product and Federal Order Class Prices *from page 3*

they drifted down from a month ago in August. These product price changes boosted the announced Class III price by more than a dollar per hundredweight, but left the Class IV price basically unchanged from July to August. This left most of the heavy lifting for August milk prices to the Class III price, aided by a much smaller increase in Class I prices.

Milk and Feed Prices

The U.S. average all-milk price for July was unchanged from a month earlier at \$17.30 per hundredweight, as reported by USDA's National Agricultural Statistics Service (NASS). This

was anticipated from the July federal order class prices, with Class III down by about a dollar per hundredweight from June, while the other three class prices rose. Feed ingredient prices were steady to higher from a month earlier in July as reported by NASS and AMS, which together increased the July monthly Margin Protection Program feed cost formula calculation by \$0.25 per hundredweight. This consequently reduced the monthly MPP margin by the same amount, to \$9.08 per hundredweight.

The U.S. average retail price of whole milk was essentially unchanged from a month earlier in July, while the July natural Cheddar cheese retail price continued to rise back toward \$5 a pound, as reported by the U.S. Bureau of Labor Statistics.

Dairy Product and Federal Order Prices	Aug 2017	Jul 2017	Aug 2016	2016–2017 Change
AMS Commodity Prices		(per pound)		
Butter	\$2.658	\$2.604	\$2.225	\$0.432
Cheese	\$1.666	\$1.543	\$1.812	-\$0.146
Nonfat Dry Milk	\$0.873	\$0.899	\$0.859	\$0.015
Dry Whey	\$0.435	\$0.451	\$0.285	\$0.150
Class Prices for Milk		(per hundredweight)		
Class I Mover	\$16.72	\$16.59	\$15.07	\$1.65
Class III	\$16.57	\$15.45	\$16.91	-\$0.34
Class IV	\$16.61	\$16.60	\$14.65	\$1.96

Milk and Feed Prices	Jul 2017	Jun 2017	Jul 2016	2016–2017 Change
Producer Prices				
All Milk (per cwt.)	\$17.30	\$17.30	\$16.10	\$1.20
Feed Prices				
Corn (per bushel)	\$3.49	\$3.43	\$3.60	-\$0.11
Soybean Meal (per ton)	\$326	\$301	\$371	-\$45
Alfalfa Hay (per ton)	\$152	\$152	\$140	\$12
2014 Farm Bill Feed Cost (per cwt.)	\$8.22	\$7.97	\$8.51	-\$0.29
2014 Farm Bill Margin (per cwt.)	\$9.08	\$9.33	\$7.59	\$1.49
Retail Dairy Product Prices				
Fluid Milk (per gallon)	\$3.219	\$3.213	\$3.062	\$0.157
Cheddar Cheese (per pound)	\$4.851	\$4.797	\$5.184	-\$0.333

Looking Ahead

The CME dairy futures have turned more bearish on milk and dairy product prices in recent weeks, weighed down by increased concern over large product stocks. The early September futures were indicating the 2017 annual average U.S. all-milk price was likely to come in slightly under USDA's September forecast, which the Department reduced by \$0.10 per hundredweight from August. They were also showing no holiday season bump in cheese prices from their reported level in August, as well as a steady reduction from August levels for butter prices through the end of the year. CME cash market prices for barrel cheese

have been a weak point in the cheese markets starting in April, when the block-barrel spread began growing beyond its normal \$0.03-per-pound difference until it reached almost \$0.30 in late July, before returning to more normal levels in mid-August. Recent trends in American-type cheese production, consumption, and exports have pointed to tighter markets, but until these manifest themselves in significant inventory reduction, they will not provide much strength to prices. USDA's forecasts of the MPP margin have dropped significantly in early September and have become more closely aligned with other forecasts. But no forecasts currently indicate that the margin will come close to falling under \$8 per hundredweight for the foreseeable future.

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