

Overview

Milk prices have seen record fluctuations in recent months, driven by the unusual events associated with the COVID-19 pandemic, with more volatility expected given market uncertainties. April witnessed the largest one-month drop in the USDA-reported U.S. average all-milk price; June saw the biggest-ever one-month increase. New records were also set in both May and June for total U.S. dairy-export volume, expressed as a percentage of total U.S. milk solids production.

Total U.S. milk production per cow was essentially flat from a year earlier during the second quarter, while total dairy cow numbers, although up modestly from a year ago, do not yet show signs of resuming the explosive expansion that occurred during the first quarter of the year. This could help limit price further price declines, even as downward pressure on demand from a sluggish economy and the struggles of schools and restaurants to fully reopen clouds the price outlook.

Commercial Use of Dairy Products

Domestic commercial use of American-type cheese turned slightly positive during this year's second quarter. Domestic use of other cheese was still down from a year ago during the quarter, as was total cheese use, but those reductions were less steep than those seen March through May. Patterns of change for domestic commercial use of milk in all products were little changed during the second quarter compared with March through May.

U.S. Dairy Trade

U.S. exports of butter and of other than American-type cheese and total cheese were significantly higher during

the second quarter of 2020 compared with the second quarter of 2019. This was a turnaround from recent months, when dry skim ingredient products were the main products to show positive U.S. export growth. Exports of these ingredient products showed even stronger increases than in previous months, particularly for skim milk powder and dry whey. Exports of all products were equivalent to 17 percent of U.S. milk solids production during the second quarter, the first time in two years that exports during three consecutive months hit the 17 percent level, by this measure.

Total exports in both May and June this year were the highest ever, as percent of domestic milk solids produced, for each of those two months.

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Domestic Commercial Use	Apr–Jun 2020	Apr–Jun 2019	2019–2020 Change	Percent Change
	(million pounds)			
Total Fluid Milk Products	NA	11,205	NA	NA
Yogurt	1,132	1,083	50	4.6%
Butter	512	454	58	12.7%
American-type Cheese	1,264	1,260	5	0.4%
All Other Cheese	1,792	1,861	-68	-3.7%
Total Cheese	3,057	3,120	-64	-2.0%
Dry Skim Milk	221	267	-46	-17.1%
All Products (milk equiv., milkfat basis)	52,734	52,829	-95	-0.2%
All Products (milk equiv., skim solids basis)	44,799	46,587	-1,787	-3.8%
All Products (milk equiv., total solids basis)	47,202	48,470	-1,268	-2.6%

U.S. Dairy Trade *from page 1*

Imports of butter were up sharply over the same period a year earlier during the second quarter. Casein imports were flat, while both cheese and milk protein concentrate imports were down significantly.

Milk Production

U.S. milk production was down by half a percent from a year earlier in May but was back up half a percent in June, as improving demand during early summer eased the need to limit production. Total cow numbers remain above a year ago but only in the 20 thousands range, with no sign yet that the national dairy cow herd is resuming the rapid growth with which it began the year.

Dairy Products

American-type cheese continued to outpace production of other cheese types during the second quarter, while butter and dry skim milk production significantly outpaced both. Expanded exports drove the dry skim production increase, which was almost entirely in the form of export-oriented skim milk powder, but improved domestic use absorbed the butter increase.

Dairy Product Inventories

Cold storage stocks of both American-type and other cheese, and butter, dropped in June from the record-high levels since at least 2000 they attained in April and May, respectively. June ending-stocks of all three products were also down significantly from their April levels as measured by days of total commercial use in stock. These reductions

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U.S. Dairy Exports	Apr–Jun 2020	Apr–Jun 2019	2019–2020 Change	Percent Change
		(metric tons)		
Butter	4,807	4,264	543	13%
Anhydrous Milk Fat / Butteroil	1,418	1,693	-275	-16%
Cheddar Cheese	13,547	16,007	-2,460	-15%
American-type Cheese	13,588	16,137	-2,549	-16%
All Other Cheese	87,180	79,586	7,594	10%
Total Cheese	100,768	95,723	5,045	5%
Nonfat Dry Milk / Skim Milk Powder	222,931	163,087	59,844	37%
Whole Milk Powder	10,988	8,613	2,375	28%
Dry Whey	51,418	39,489	11,929	30%
Whey Protein Concentrate / Isolate	49,081	45,353	3,728	8%
Lactose	102,512	95,896	6,616	7%
Percent of U.S. Milk Solids Exported	17.0%	14.3%	2.7%	19%

U.S. Dairy Imports	Apr–Jun 2020	Apr–Jun 2019	2019–2020 Change	Percent Change
		(metric tons)		
Butter	14,035	10,319	3,717	36%
Cheese	33,415	42,100	-8,685	-21%
Nonfat Dry Milk / Skim Milk Powder	367	28	339	1216%
MPC (all protein levels)	12,372	16,828	-4,457	-26%
Casein	16,858	16,689	169	1%
Percent of U.S. Milk Solids Imported	3.4%	3.6%	-0.2%	-5%

Dairy Product Inventories *from page 2*

reflect, among other factors, the significant government purchases and partial recovery in food service purchases that took place during these months.

Dairy Product and Federal Order Class Prices

June 2020 witnessed the largest one-month increases since January 2000 (when the current federal order pricing formulas were implemented) for the following constituents of those formulas: the monthly NDPSR cheese price; the

monthly protein component price; the Class III skim milk price, and the Class III price. July showed the third-highest month-to-month increases in the first three of these and the fourth-highest increase in the Class III price. Together, these represent an unprecedented two-month price move in all four of these Class III-related federal order prices.

An all-but-inevitable consequence of this has been the unusually large negative Producer Price Differentials (PPDs) in the component pricing federal orders for both June and July. The phenomenon, which is infrequent, is expected to be short-lived, given price trends in July and

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Milk and Dairy Products Production	Apr–Jun 2020	Apr–Jun 2019	2019–2020 Change	Percent Change
Milk Production				
Cows (1,000 head)	9,362	9,331	31	0.3%
Per Cow (pounds)	5,975	5,971	4	0.1%
Total Milk (million pounds)	55,938	55,716	222	0.4%
Total Milk Solids (million pounds)	7,153	7,108	45	0.6%
Dairy Products Production		(million pounds)		
Cheese				
American Types	1,328	1,302	26	2.0%
Cheddar	959	935	24	2.6%
Italian Types	1,407	1,412	-5	-0.3%
Mozzarella	1,115	1,118	-3	-0.3%
Total Cheese	3,269	3,259	11	0.3%
Butter	546	497	48	9.7%
Dry Milk Products				
Nonfat Dry Milk	500	499	1	0.2%
Skim Milk Powder	149	125	24	19.1%
Dry Whey	250	237	13	5.4%
Whey Protein Concentrate	118	122	-4	-3.5%

Dairy Product Inventories	Jun 2020	May 2020	Jun 2019	2019–2020 Change
		(million pounds)		
Butter	362	376	326	11%
American Cheese	793	820	784	1%
Other Cheese	623	634	596	4%
Nonfat Dry Milk	289	346	291	-1%
Dry Whey	84	85	68	24%

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

August that are bringing federal order class prices back to more normal relationships.

Compared with these price movements, retail prices of the major dairy products have been relatively stable in recent months.

Milk and Feed Prices

The Dairy Margin Coverage (DMC) program margin for June was \$9.99 per cwt., \$4.61 per cwt. higher than the margin

for May, just a month earlier. This was by far the largest one-month increase in the margin since the inception of its predecessor, the Margin Protection Program, in 2014. The previous largest margin increase in a single month was \$1.84 per cwt. in July 2016. The record jump in the June margin came just two months after the April margin set the record for the largest drop in a single month. The record June increase was due almost entirely to a \$4.50 per cwt. increase in the U.S. average all-milk price from May. This was itself an all-time record one-month increase in the milk price, with the next highest at \$2.60 per cwt., in

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Dairy Product and Federal Order Prices	Jul 2020	Jun 2020	Jul 2019	2019–2020 Change
NDPSR Dairy Product Prices				
		(per pound)		
Butter	\$1.789	\$1.707	\$2.389	-\$0.601
Cheddar Cheese	\$2.587	\$2.215	\$1.824	\$0.764
40-Pound Blocks	\$2.698	\$2.257	\$1.849	\$0.849
500-Pound Barrels	\$2.437	\$2.148	\$1.763	\$0.674
Nonfat Dry Milk	\$0.972	\$0.911	\$1.039	-\$0.068
Dry Whey	\$0.344	\$0.364	\$0.363	-\$0.019
Federal Order Class Prices for Milk				
		(per hundredweight)		
Class I Mover	\$16.56	\$11.42	\$17.18	-\$0.62
Class III	\$24.54	\$21.04	\$17.55	\$6.99
Class IV	\$13.76	\$12.90	\$16.90	-\$3.14
Retail Dairy Product Prices				
Fluid Whole Milk (per gallon)	\$3.255	\$3.198	\$3.031	\$0.224
Lowfat Fluid Milk (per gallon)	\$2.826	\$2.811	\$2.674	\$0.152
Cheddar Cheese (per pound)	\$5.517	\$5.619	\$5.349	\$0.168
Butter (per pound)	\$3.572	\$3.491	\$3.977	-\$0.405

Milk and Feed Prices	Jun 2020	May 2020	Jun 2019	2019–2020 Change
Producer Prices				
All Milk (per cwt.)	\$18.10	\$13.60	\$18.10	\$0.00
Feed Prices				
Corn (per bushel)	\$3.16	\$3.20	\$3.98	-\$0.82
Soybean Meal (per ton)	\$289	\$289	\$325	-\$36
Alfalfa Hay (per ton)	\$190	\$195	\$205	-\$15
DMC Feed Cost (per cwt.)	\$8.11	\$8.23	\$9.47	-\$1.35
DMC Margin (per cwt.)	\$9.99	\$5.37	\$8.63	\$1.35

Milk and Feed Prices *from page 4*

April 2004. The June feed cost formula was down by just eleven cents a hundredweight from May a month earlier.

Looking Ahead

The July all-milk price will be one of the highest recorded since 2014 and will potentially rival those booked in the final months of 2019. Thereafter, however, the monthly all-milk price is expected to recede by several dollars per hundredweight to around \$18 per cwt. by the end of the year.

These price expectations reflect the currently swelling second wave of the coronavirus, and its consequent setback to the gradual recovery of food service demand for dairy products in recent months, plus its clouding of expectations for resumption of school use of milk and dairy products this fall.

Uncertainty is also surrounding the outlook for expanded milk production following the strong recovery in milk prices this summer. The dairy situation and outlook continues to be dominated by pandemic-related events and will continue to be so for many months to come.

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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.