

Overview

2020 continues to bring turbulent headwinds to dairy demand, which the industry has survived with heightened government support and robust export markets.

Total domestic commercial use of dairy products posted a small gain during the August–October period, despite the pandemic’s renewed assault on food-service sales. Continued government purchases of dairy products through the Food Box, Section 32 and other programs added significantly to total sales during the period, strengthening milk and dairy product prices. Export growth remains striking, with year-to-date volumes showing a record portion of U.S. milk solids production going abroad.

The U.S. average all-milk price reported by USDA rose \$2.30 per cwt from a month before to hit \$20.20 per cwt in October. The monthly cheese price reached \$2.45 per pound in November, a gain of 16 cents a pound from a month earlier, providing an indication that November’s all-milk price will top October’s.

Forecasts for 2021 are less certain than usual, with divergence between futures markets and government projections based largely on differing demand assumptions related to the course of the pandemic.

Commercial Use of Dairy Products

USDA’s ongoing monthly analyses of commercial use of milk and dairy products provide a good general picture of how domestic dairy consumption is evolving with the coronavirus pandemic. The emphasis needs to be on “general” in this context because the methodology for these calculations cannot distinguish between marketing channels, i.e., retail or food-service, and they also consider most of the large volumes of dairy products USDA has purchased for food

assistance donations this year as commercial use. Only a small amount of product is specifically identified as non-commercial “net removals” by government, based on funding source. USDA has identified only 6 million pounds of butter and just over 13 million pounds of cheese as “net removals” during the first ten months of 2020. By these inclusive calculations, domestic commercial use of butter jumped by an annual rate of almost 13 percent during the first three full months of the pandemic, April through June,

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Domestic Commercial Use	Aug–Oct 2020	Aug–Oct 2019	2019–2020 Change	Percent Change
	(million pounds)			
Total Fluid Milk Products	NA	11,687	NA	NA
Yogurt	1,157	1,070	87	8.1%
Butter	551	560	-9	-1.6%
American-type Cheese	1,343	1,311	32	2.4%
All Other Cheese	1,916	1,950	-34	-1.7%
Total Cheese	3,259	3,261	-2	-0.1%
Dry Skim Milk	221	209	11	5.4%
All Products (milk equiv., milkfat basis)	57,311	56,799	512	0.9%
All Products (milk equiv., skim solids basis)	45,594	45,571	23	0.0%
All Products (milk equiv., total solids basis)	49,169	48,981	188	0.4%

Commercial Use of Dairy Products *from page 1*

but dropped by just over one and a half percent during the following four months.

The corresponding numbers for total cheese were a 1.8 percent drop during the first three months followed by slight growth, of 0.4 percent, during the following four. The breakout numbers for American-type cheese were both positive and stronger during the second, four-month period, but were both negative, yet improving, during the latter period for all other types of cheese.

Overall domestic consumption of dairy products during the pandemic months from April through October is down by 1.2 percent, on a milk equivalent, total milk solids basis. The only month of positive growth during these seven was September, which was sufficient to move domestic growth up slightly during the August–October period.

U.S. Dairy Trade

In contrast to domestic consumption, U.S. dairy exports have been up sharply in 2020. Year-to-date through October, exports were 15 percent higher, on a milk equivalent basis, than during the same period a year earlier. Growth has been particularly robust for butter, cheese, dry skim milk products, dry whey, whey protein concentrate and whey protein isolate.

During these first 10 months, 16.3 percent of total U.S. milk solids production has been exported. This set a record – just barely – for the first ten months of any year by inching out 2018’s 16.2 percent, but it sailed past 2013 and 2014, which tied for third place, each at 15.5 percent of total milk solids production.

Monthly U.S. dairy imports reached a peak in 2020 during May–July, when they averaged 7 percent above monthly imports during the prior four months, January–April,

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U.S. Dairy Exports	Aug–Oct 2020	Aug–Oct 2019	2019–2020 Change	Percent Change
		(metric tons)		
Butter	5,466	4,969	497	10%
Anhydrous Milk Fat / Butteroil	984	1,146	-161	-14%
Cheddar Cheese	9,888	7,973	1,915	24%
American-type Cheese	9,941	8,075	1,866	23%
All Other Cheese	74,161	74,044	117	0%
Total Cheese	84,102	82,119	1,983	2%
Dry Skim Milk	207,085	187,194	19,891	11%
Whole Milk Powder	8,026	11,345	-3,319	-29%
Dry Whey	64,156	35,958	28,198	78%
Whey Protein Concentrate/Isolate	53,323	43,955	9,368	21%
Lactose	90,154	93,241	-3,087	-3%
Percent of U.S. Milk Solids Exported	16.5%	14.9%	1.6%	10%

U.S. Dairy Imports	Aug–Oct 2020	Aug–Oct 2019	2019–2020 Change	Percent Change
		(metric tons)		
Butter	11,405	12,651	-1,246	-10%
Cheese	46,156	54,687	-8,530	-16%
Dry Skim Milk	146	32	114	361%
MPC (all protein levels)	7,601	6,667	933	14%
Casein	11,398	13,791	-2,393	-17%
Percent of U.S. Milk Solids Imported	2.9%	3.5%	-0.6%	-17%

U.S. Dairy Trade *from page 2*

measured by total milk solids content. This changed abruptly during August–October, when average monthly imports dropped below those during January–April by 12 percent.

More than one-third of the total milk solids imported into the United States during the first 10 months of 2020 were in the form of concentrated milk proteins, including casein, MPC, WPC, MPI and WPI. Just under one-quarter of total milk solids were imported as cheese, and just under one-fifth came in as high milkfat-containing products, including butter, AMF, and high-fat creams.

Milk Production

The annual rate of increase in the U.S. milking cow herd stayed relatively steady during the second and third quarters, following a growth spurt during the first quarter, but herd expansion is now accelerating again. There were 43,000 more cows compared to the same months a year earlier during April, August and September, and 42,000 more in July, but 48,000 more in October and 62,000 more in November.

As a consequence, milk production growth has risen fairly steadily since the first quarter. It was up over a year earlier

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Milk and Dairy Products Production	Aug–Oct 2020	Aug–Oct 2019	2019–2020 Change	Percent Change
Milk Production				
Cows (1,000 head)	9,377	9,333	45	0.5%
Per Cow (pounds)	5,881	5,785	96	1.7%
Total Milk (million pounds)	55,151	53,997	1,154	2.1%
Total Milk Solids (million pounds)	7,080	6,892	189	2.7%
Dairy Products Production				
		(million pounds)		
Cheese				
American Types	1,343	1,313	30	2.2%
Cheddar	958	915	43	4.7%
Italian Types	1,376	1,423	-47	-3.3%
Mozzarella	1,083	1,131	-48	-4.2%
Total Cheese	3,314	3,332	-19	-0.6%
Butter	468	449	20	4.4%
Dry Milk Products				
Nonfat Dry Milk	409	383	26	6.7%
Skim Milk Powder	191	167	24	14.3%
Dry Whey	234	266	-33	-12.3%
Whey Protein Concentrate	120	121	-1	-0.8%

Dairy Product Inventories	Oct 2020	Sept 2020	Oct 2019	2019–2020 Change
		(million pounds)		
Butter	300	344	235	28%
American Cheese	754	772	744	1%
Other Cheese	585	583	598	-2%
Dry Skim Milk	244	243	224	9%
Dry Whey	68	79	79	-14%

Milk Production *from page 3*

by just 0.5 percent during the second quarter but reached 2.1 percent annual growth during August–October and 3 percent during November, according to data released after the time period covered in this report.

Milk solids production growth has begun again this year to steadily exceed growth of liquid milk production. During the first half, the two kept pace with each other, but during August–October, total milk solids production was 2.7 percent above a year ago. States clustering at the higher levels of

recent milk production growth were located mostly in the central section of the country, with few from the East or the West.

Dairy Products

During August–October, total commercial use (domestic plus exports) grew at least 4 percent faster than production for yogurt and dry whey. On the other hand, production outpaced total commercial use by at least 4 percent for butter, lactose, whole milk powder and WPI during the period. In between were American-type cheese, other cheese, dry skim milk

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Dairy Product and Federal Order Prices	Nov 2020	Oct 2020	Nov 2019	2019–2020 Change
NDPSR Dairy Product Prices				
		(per pound)		
Butter	\$1.456	\$1.525	\$2.087	-\$0.631
Cheddar Cheese	\$2.454	\$2.292	\$2.172	\$0.281
40-Pound Blocks	\$2.581	\$2.569	\$2.099	\$0.482
500-Pound Barrels	\$2.293	\$1.964	\$2.228	\$0.065
Nonfat Dry Milk	\$1.082	\$1.067	\$1.154	-\$0.072
Dry Whey	\$0.383	\$0.348	\$0.307	\$0.076
Federal Order Class Prices for Milk				
		(per hundredweight)		
Class I Mover	\$18.04	\$15.20	\$18.14	-\$0.10
Class III	\$23.34	\$21.61	\$20.45	\$2.89
Class IV	\$13.30	\$13.47	\$16.60	-\$3.30
Retail Dairy Product Prices				
Fluid Whole Milk (per gallon)	\$3.425	\$3.380	\$3.189	\$0.236
Lowfat Fluid Milk (per gallon)	\$3.002	\$2.928	\$2.818	\$0.184
Cheddar Cheese (per pound)	\$5.589	\$5.583	\$5.309	\$0.280
Butter (per pound)	\$3.325	\$3.586	\$3.713	-\$0.388

Milk and Feed Prices	Oct 2020	Sept 2020	Oct 2019	2019–2020 Change
Producer Prices				
All Milk (per cwt.)	\$20.20	\$17.90	\$19.90	\$0.30
Feed Prices				
Corn (per bushel)	\$3.61	\$3.41	\$3.84	-\$0.23
Soybean Meal (per ton)	\$367	\$321	\$309	\$57
Alfalfa Hay (per ton)	\$183	\$182	\$192	-\$10
DMC Feed Cost (per cwt.)	\$9.07	\$8.50	\$9.02	\$0.04
DMC Margin (per cwt.)	\$11.13	\$9.40	\$10.88	\$0.26

Dairy Products from page 4

products, and WPC, for which total commercial use closely kept pace with production or increased by up to one percent faster than production.

Dairy Product Inventories

October-ending stocks of the major dairy products were either unchanged or lower than a month before. This has assisted cheese in making its second major price runup of 2020.

Dairy Product and Federal Order Class Prices

Monthly cheese prices hit their second major peak of the year in November, but one not quite as high as the first one in July. Nonfat dry milk prices have risen slowly, but steadily since last May, while butter prices, following a spectacular 3-month rise of more than 50 cents a pound from April to July, gave back 33 cents of that rise by November. The November Class III price was again well above the other federal order Class prices, producing the second-lowest, negative, producer price differentials (PPDs) of the year in most of the component pricing orders.

The monthly differences between the retail prices for whole and low-fat fluid milk have been generally increasing since the Bureau of Labor Statistics began again to report retail prices for low-fat milk in April 2018, following a reporting hiatus of almost 16 years. During September–November, these differences moved decisively above 40 cents a gallon for the first time, to average 43.6 cents a gallon during the period.

Milk and Feed Prices

The unusual pattern and timing of events that have buffeted the dairy industry this year produced monthly gyrations in the U.S. average all-milk price that have averaged \$2.30 per cwt since the first full month of the pandemic back in April. October's price rose by this same amount over September, on its way up a second peak for milk prices this year. The

Dairy Margin Coverage (DMC) program calculated feed cost, by contrast, dropped steadily by an average of 17 cents per cwt of milk each month from April through August, but then abruptly changed course and has risen by over 50 cents per cwt during the following two months, driven by gains in corn and soybean meal prices.

Looking Ahead

The weekly National Dairy Product Price Reports, the daily Chicago Mercantile Exchange cash prices and the CME dairy futures are all indicating that the monthly cheese price will fall sharply from its November peak of \$2.45 per pound. As of mid-December, the futures show a price not much above \$1.60 per pound for the months around the new year, followed by a slow climb up to around \$1.80 per pound by late summer.

The futures were also showing modest optimism for price improvements for the three other NDPSR products as 2021 proceeds, pointing to a milk price improvement from barely above \$17 per cwt in January to the mid-\$19 per cwt range by late summer, and averaging \$18.25 for all of 2021, just about the same as 2020. USDA was much more downbeat in its mid-December dairy outlook. It projected 2021's annual average all-milk price at \$16.60 per cwt, a sharp downward revision of its month-earlier projection of \$17.70 per cwt for all of 2021.

The following reality will determine whether the coming year will more closely resemble the futures markets' relative optimism or USDA's pessimism: total consumption of U.S. produced dairy products will be challenged, to say the least, to keep pace with milk production growth, well into the year. Until food service returns to normal levels, even strong retail sales, continued export growth and on-going USDA purchases under Section 32 and other programs at likely funding levels may not produce the demand growth required to absorb the production levels the nation's dairy farmers are clearly indicating they can achieve, even under the current conditions.

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Dairy Management Inc.TM and state, regional, and international organizations work together to drive demand for dairy products on behalf of America's dairy farmers, through the programs of the American Dairy Association[®], the National Dairy Council[®], and the U.S. Dairy Export Council[®].

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