

Overview

2020 looks to be a year of continuing recovery for dairy markets, with the return to positive year-over-year export growth for many of the important U.S. dairy export products and a drop in butter imports. Milk production growth appears to be slow, though markets were spooked when, following almost a year of little change, annual growth of U.S. milk production jumped to over one percent in September and October. November's preliminary number showed growth dropping back below that, helping prices at year's end.

Fairly steady price improvements throughout the year for cheese, nonfat dry milk and milk itself made 2019 a year of general price recovery. Still, heading into the new year, weaker butter prices, which dropped below \$2.00 a pound for the first time in over three years, gave markets something to watch, making the balance between increasing global demand and domestic supply growth crucial to prosperity in 2020.

Commercial Use of Dairy Products

Domestic commercial use of nonfat dry milk and skim milk powder was down from a year earlier during September–November, as stepped-up exports drew product away from the domestic market. Domestic commercial use of milk in all products was unchanged on a skim solids basis during the period, as exports picked up for several other skim milk dry ingredient products. Growth in domestic use of cheese generally kept ahead of production.

U.S. Dairy Trade

The U.S. dairy export situation improved during September–November relative to several previous three-month periods.

Annual export volume growth was positive for most of the important dairy product categories in the latest period, including all major cheese categories plus concentrated whey protein products and lactose. Total exports were equivalent to 15.5 percent of U.S. milk solids production during the period, up from 14.8 percent a year earlier. Dry whey is the major U.S. export product that continued to lag, with China accounting for over 80 percent of the lower volume compared with a year ago.

Butter import growth switched from positive to negative last October and continued through November, dropping three-month butter imports below a year ago for the first time in many months during the September–November

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Domestic Commercial Use	Sept–Nov 2019	Sept–Nov 2018	2018–2019 Change	Percent Change
	(million pounds)			
Total Fluid Milk Products	NA	12,034	NA	NA
Yogurt	1,017	1,043	-26	-2.5%
Butter	585	583	2	0.3%
American–type Cheese	1,292	1,278	15	1.1%
All Other Cheese	1,973	1,956	16	0.8%
Total Cheese	3,265	3,234	31	1.0%
Nonfat Dry Milk/Skim Milk Powders	135	144	-9	-6.4%
All Products (milk equiv., milkfat basis)	56,637	55,756	881	1.6%
All Products (milk equiv., skim solids basis)	44,141	44,126	15	0.0%
All Products (milk equiv., total solids basis)	47,981	47,693	287	0.6%

U.S. Dairy Trade *from page 1*

period. Annual growth of milk protein concentrate and casein imports is moderating and turned negative for casein in November.

Milk Production

U.S. milk production increased by 1.1 percent from a year ago during September–November. Total milk solids production increased just one-tenth of a percent slower during the same period. September and October monthly milk production increases were both above one percent, but November was up by well under a percent. Milk production growth will be crucial to determining dairy prices this year. Following 2014’s strong milk prices, production had tended to outpace total demand until finally coming to a near-halt in 2019 and stimulating a sustained price recovery during the year. Indications last fall that milk production growth was resuming

stalled that recovery while markets struggled to find a new direction. Last November, 12 states, producing 42 percent of U.S. milk, collectively increased their year-over-year production by 3.2 percent over the previous November. These states show indications they will continue to expand production even as milk prices fall below late-2019 levels. Current market news reports indicated that all regions of the country are receiving adequate milk supplies to meet market needs. Where milk production and prices find a balance point will be the dominant issue defining U.S. dairy prices this year.

Dairy Products

Total American-type cheese production declined 1.5 percent during September–November compared with a year earlier. Similarly, Cheddar cheese production was down by more 4 percent in both September and October but off by only 1.2 percent in November. These are indications that changes in

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U.S. Dairy Exports	Sept–Nov 2019	Sept–Nov 2018	2018–2019 Change	Percent Change
		(metric tons)		
Butter	4,813	5,666	-853	-15%
Anhydrous Milk Fat / Butteroil	1,034	8,070	-7,036	-87%
Cheddar Cheese	8,174	7,698	476	6%
American-type Cheese	8,281	7,808	473	6%
All Other Cheese	76,008	70,123	5,885	8%
Total Cheese	84,289	77,931	6,358	8%
Nonfat Dry Milk / Skim Milk Powder	203,463	160,705	42,757	27%
Whole Milk Powder	8,985	14,683	-5,698	-39%
Dry Whey	34,572	48,762	-14,190	-29%
Whey Protein Concentrate / Isolate	46,117	42,947	3,170	7%
Lactose	93,467	85,684	7,784	9%
Percent of U.S. Milk Solids Exported	15.5%	14.8%	0.7%	4%

U.S. Dairy Imports	Sept–Nov 2019	Sept–Nov 2018	2018–2019 Change	Percent Change
		(metric tons)		
Butter	10,036	11,546	-1,510	-13%
Cheese	53,407	49,854	3,553	7%
Nonfat Dry Milk / Skim Milk Powder	26	379	-354	-93%
MPC (all protein levels)	9,432	8,449	983	12%
Casein	12,869	12,365	505	4%
Percent of U.S. Milk Solids Imported	3.7%	3.3%	0.4%	11%

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milk production tend to be reflected in cheese production, underscoring why Cheddar cheese prices are currently sensitive to the changing outlook for milk production. Growth in nonfat dry milk and skim milk powder production at a rate faster than raw milk production may reflect declining fluid use of skim milk.

Dairy Product Inventories

Stocks of American-type cheese were lower at the end of November than they had been during the two preceding

years. Butter stocks show strong cyclical seasonality, and November-ending butter stocks were above their November averages for at least the last four years, both in total volume as well as days of total commercial use in stock.

Dairy Product and Federal Order Class Prices

The USDA/AMS monthly survey price of butter was lower in December than it had been in any month since November 2016. By contrast, the December survey price of nonfat dry milk was the highest it had been, and the first time above \$1.20 a pound, since December 2014. The December survey

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Milk and Dairy Products Production	Sept–Nov 2019	Sept–Nov 2018	2018–2019 Change	Percent Change
Milk Production				
Cows (1,000 head)	9,331	9,364	-33	-0.4%
Per Cow (pounds)	5,698	5,619	79	1.4%
Total Milk (million pounds)	53,175	52,616	559	1.1%
Total Milk Solids (million pounds)	6,863	6,795	69	1.0%
Dairy Products Production				
Cheese		(million pounds)		
American Types	1,295	1,315	-20	-1.5%
Cheddar	904	935	-31	-3.4%
Italian Types	1,430	1,404	26	1.8%
Mozzarella	1,140	1,110	30	2.7%
Total Cheese	3,319	3,309	10	0.3%
Butter	451	433	17	4.0%
Dry Milk Products				
Nonfat Dry Milk	398	370	28	7.5%
Skim Milk Powder	141	138	3	2.4%
Dry Whey	257	226	30	13.4%
Whey Protein Concentrate	121	125	-5	-3.7%

Dairy Product Inventories	Nov 2019	Oct 2019	Nov 2018	2018–2019 Change
		(million pounds)		
Butter	181	235	154	17%
American Cheese	740	744	799	-7%
Other Cheese	582	598	554	5%
Nonfat Dry Milk	223	218	289	-23%
Dry Whey	80	79	68	17%

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

price for Cheddar cheese was down by twelve cents a pound from November, which was also the highest, and the first time above \$2.00 a pound, in five years. Prices for barrel and block cheese were both down in December from a month earlier, while the monthly survey price for barrels was higher than that for blocks for the second month in a row, which is unusual.

U.S. average retail prices of low-fat fluid milk have averaged about 30 cents per gallon less than whole milk retail prices

since the U.S. Bureau of Labor Statistics began reporting retail prices of low-fat milk again in April 2018. The monthly variation in the difference between the two prices has a 40% correlation with the Class I butterfat price two months earlier.

Milk and Feed Prices

The U.S. average all-milk price rose more than \$1.00 per cwt. in November from a month earlier to \$21.00 per cwt. and was, once again, the highest since the beginning of 2015. The November DMC margin, at \$12.21 per cwt., was

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Dairy Product and Federal Order Prices	Dec 2019	Nov 2019	Dec 2018	2018–2019 Change
AMS Commodity Prices		(per pound)		
Butter	\$1.984	\$2.087	\$2.243	-\$0.258
Cheddar Cheese	\$2.051	\$2.172	\$1.374	\$0.677
40-Pound Blocks	\$1.936	\$2.099	\$1.403	\$0.533
500-Pound Barrels	\$2.140	\$2.228	\$1.316	\$0.823
Nonfat Dry Milk	\$1.216	\$1.154	\$0.902	\$0.314
Dry Whey	\$0.329	\$0.307	\$0.469	-\$0.139
Class Prices for Milk		(per hundredweight)		
Class I Mover	\$19.33	\$18.14	\$15.05	\$4.28
Class III	\$19.37	\$20.45	\$13.78	\$5.59
Class IV	\$16.70	\$16.60	\$15.09	\$1.61
Retail Dairy Product Prices				
Fluid Whole Milk (per gallon)	\$3.188	\$3.189	\$2.853	\$0.335
Lowfat Fluid Milk (per gallon)	\$2.872	\$2.818	\$2.629	\$0.243
Cheddar Cheese (per pound)	\$5.302	\$5.309	\$5.360	-\$0.058
Butter (per pound)	\$3.624	\$3.713	\$3.931	-\$0.307

Milk and Feed Prices	Nov 2019	Oct 2019	Nov 2018	2018–2019 Change
Producer Prices				
All Milk (per cwt.)	\$21.00	\$19.90	\$17.00	\$4.00
Feed Prices				
Corn (per bushel)	\$3.68	\$3.84	\$3.41	\$0.27
Soybean Meal (per ton)	\$303	\$309	\$311	-\$7
Alfalfa Hay (per ton)	\$191	\$192	\$175	\$16
DMC Feed Cost (per cwt.)	\$8.79	\$9.02	\$8.34	\$0.45
DMC Margin (per cwt.)	\$12.21	\$10.88	\$8.66	\$3.55

Milk and Feed Prices *from page 4*

also the highest over that time, even allowing for the addition of dairy-quality alfalfa hay to the DMC feed cost formula, which reduces the DMC margin calculation. All three components of the feed cost formula were lower in November than a month earlier.

Looking Ahead

The markets' skittishness at the end of 2019 showed the sensitivity of milk prices to domestic production. Milk in excess of market needs tends to flow to excess cheese production, and the price impact of this flows from cheese back to milk. In this context, USDA's January dairy outlook

projections include some optimism. Compared with a month earlier, the Department lowered its 2020 forecasts for U.S. milk production as well as for U.S. cheese and butterfat imports, and raised its forecasts for U.S. cheese and skim milk powder exports. Yet despite this, the Department at the same time reduced its 2020 price forecasts for all the major dairy products except for nonfat dry milk as well as for the Class III, Class IV and all-milk prices. These changes mirror the price outlook indicated by the current CME dairy futures. As of mid-January, the futures were indicating 2020 annual averages, per pound, of \$2.10 for butter, \$1.80 for cheese, \$1.30 for nonfat dry milk, and \$19.50 per cwt. for the all-milk price, which would be \$0.90 per cwt. higher than the 2019 average.

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