

Overview

2021 has opened with a mix of bullish and bearish market indicators, as the dairy industry moves through another major surge of the coronavirus pandemic and the federal policy outlook is uncertain with a new administration and Congress in Washington.

The U.S. average all-milk price reached its peak for the 2020 calendar year in November and isn't expected to reach similar levels until the second half of the year, at the earliest. Meanwhile, milk production continues to rise: compared with a year earlier, November U.S. milk production was 3.0 percent higher, total milk solids production was 3.3 percent higher, and total U.S. dairy cows were up by 62,000. All three were the highest rates of increase in several years.

Growth in total domestic commercial use of milk in all dairy products ticked up during September–November. Still, a temporary lull in government purchases of dairy products at the end of 2020 was accompanied by a drop in the monthly survey cheese price of more than eighty cents a pound from November to December. This took the Class III price down by \$7.62/cwt from the previous month. That development in turn reestablished a relatively normal relationship between December federal order class prices, generating mostly positive producer price differentials in the seven component pricing orders for the first time since last May.

Shipments overseas continued to be a bright spot in the dairy economy. Although slipping some in November from prior monthly pandemic levels, exports for all of 2020 remain on track to hit a record level of milk solids exported during a calendar year.

Commercial Use of Dairy Products

Domestic commercial use of milk in all dairy products showed stronger growth during the September–November

period than during many earlier rolling three-month periods, in terms of both milkfat and skim solids usage. Significant increases in American-type cheese and butter, bolstered by government purchases, helped drive this increase.

Domestic Commercial Use	Sept–Nov 2020	Sept–Nov 2019	2019–2020 Change	Percent Change
	(million pounds)			
Total Fluid Milk Products	11,517	11,806	-289	-2.4%
Yogurt	1,096	1,034	63	6.1%
Butter	613	603	10	1.6%
American-type Cheese	1,347	1,291	55	4.3%
All Other Cheese	1,925	1,970	-45	-2.3%
Total Cheese	3,272	3,262	10	0.3%
Dry Skim Milk	181	141	40	28.4%
All Products (milk equiv., milkfat basis)	57,819	56,841	977	1.7%
All Products (milk equiv., skim solids basis)	44,770	44,200	570	1.3%
All Products (milk equiv., total solids basis)	48,793	48,087	706	1.5%

U.S. Dairy Trade

U.S. dairy exports were equivalent to 15.2 percent of U.S. milk solids production during November, the lowest monthly level by this measure since January 2020, prior to the pandemic. Drops from recent levels in exported skim milk powder, lactose and cheese were the principal causes of the decline. Despite this, calendar-year 2020's total dairy exports remain on track to set a record in terms of milk solids percentage exported.

Compared with a year earlier, U.S. dairy imports were basically flat to lower in all major product categories during September–November.

Milk Production

U.S. milk production was 3 percent higher in November 2020 than it was the previous November, the highest annual percentage increase for a single month since January 2015.

November milk solids production was 3.3 percent above a year earlier. Growth of U.S. dairy cow numbers has started to accelerate again, with November cows reported at 62,000 higher than in November 2019, the largest year-over-year increase for a single month since October 2017. The United States averaged 51,000 more milking cows during September–November compared with the same period a year earlier. Cow numbers increased by a total of 58,000 during this period in Texas, Indiana and South Dakota alone.

Dairy Products

Additional milk solids produced in September–November is spurring growing production of American-type cheese, butter and dry skim milk products. Offsetting this is lower production of cheese types other than American, leaving total cheese production up slightly and total dry whey production down during the period. It's uncommon for

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U.S. Dairy Exports	Sept–Nov 2020	Sept–Nov 2019	2019–2020 Change	Percent Change
		(metric tons)		
Butter	5,151	4,821	329	7%
Anhydrous Milk Fat / Butteroil	929	1,034	-106	-10%
Cheddar Cheese	8,160	8,194	-35	0%
American–type Cheese	8,206	8,301	-95	-1%
All Other Cheese	68,828	75,722	-6,894	-9%
Total Cheese	77,034	84,023	-6,989	-8%
Dry Skim Milk	200,457	203,473	-3,016	-1%
Whole Milk Powder	9,666	8,985	681	8%
Dry Whey	59,693	34,561	25,133	73%
Whey Protein Concentrate / Isolate	54,859	46,039	8,821	19%
Lactose	88,553	93,467	-4,914	-5%
Percent of U.S. Milk Solids Exported	16.0%	15.4%	0.6%	4%

U.S. Dairy Imports	Sept–Nov 2020	Sept–Nov 2019	2019–2020 Change	Percent Change
		(metric tons)		
Butter	9,227	10,001	-774	-8%
Cheese	47,581	53,284	-5,703	-11%
Dry Skim Milk	105	51	54	107%
MPC (all protein levels)	6,751	9,432	-2,681	-28%
Casein	13,235	12,869	366	3%
Percent of U.S. Milk Solids Imported	2.9%	3.5%	-0.5%	-15%

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American-type as well as cheddar cheese production to outpace production of other types of cheese, mozzarella in particular, by such large margins.

Dairy Product Inventories

Commercial stocks of butter at the end of November were down significantly from a month earlier, but they were still higher, by almost a week, in terms of days of total commercial use in stock levels typical for the month of November, given the highly seasonal pattern of butter inventories. By this

same measure, November ending stocks of American-type cheese, other cheese, and dry skim milk were not excessive relative to their respective, non-seasonal, trends.

Dairy Product and Federal Order Class Prices

Monthly average survey prices for butter, nonfat dry milk and dry whey were little changed from November to December, but the cheese price took a steep drop of more than eighty cents a pound, taking the Class III price down by \$7.62/cwt in the process. These price moves reestablished a relatively

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Milk and Dairy Products Production	Sept–Nov 2020	Sept–Nov 2019	2019–2020 Change	Percent Change
Milk Production				
Cows (1,000 head)	9,393	9,342	51	0.5%
Per Cow (pounds)	5,811	5,698	113	2.0%
Total Milk (million pounds)	54,581	53,236	1,345	2.5%
Total Milk Solids (million pounds)	7,094	6,882	212	3.1%
Dairy Products Production				
		(million pounds)		
Cheese				
American Types	1,346	1,294	52	4.0%
Cheddar	957	903	54	5.9%
Italian Types	1,389	1,428	-39	-2.7%
Mozzarella	1,094	1,136	-42	-3.7%
Total Cheese	3,328	3,312	16	0.5%
Butter	485	469	16	3.5%
Dry Milk Products				
Nonfat Dry Milk	416	389	27	6.9%
Skim Milk Powder	184	157	27	17.2%
Dry Whey	220	257	-36	-14.2%
Whey Protein Concentrate	118	121	-3	-2.8%

Dairy Product Inventories	Nov 2020	Oct 2020	Nov 2019	2019–2020 Change
		(million pounds)		
Butter	252	300	181	39%
American Cheese	760	756	740	3%
Other Cheese	585	585	582	0%
Dry Skim Milk	259	244	238	9%
Dry Whey	67	68	79	-15%

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

normal relationship between federal order class prices in December, generating mostly positive producer price differentials in the seven component pricing orders for the first time since last May.

Retail prices for fluid milk generally reached their lowest levels of 2020 last June but subsequently rose by more than 10 percent during the second half of the year. By contrast, retail cheese prices drifted down slowly during the second half of 2020, following sharp increases during the first half.

Milk and Feed Prices

The U.S. average all-milk price reached its peak for 2020, at \$21.30/cwt, in November. The DMC monthly margin hit its second-highest level of the year that month, at \$11.87/cwt. The feed cost component of the November DMC margin was also the highest for 2020, as strong export demand and weather issues boosted corn and soybean meal prices throughout the fall. December milk prices and the DMC margin are both expected to be lower when they are reported at the end of January.

Dairy Product and Federal Order Prices	Dec 2020	Nov 2020	Dec 2019	2019–2020 Change
NDPSR Dairy Product Prices				
		(per pound)		
Butter	\$1.443	\$1.456	\$1.984	-\$0.541
Cheddar Cheese	\$1.643	\$2.454	\$2.051	-\$0.408
40-Pound Blocks	\$1.771	\$2.581	\$1.936	-\$0.166
500-Pound Barrels	\$1.494	\$2.293	\$2.140	-\$0.645
Nonfat Dry Milk	\$1.095	\$1.082	\$1.216	-\$0.121
Dry Whey	\$0.417	\$0.383	\$0.329	\$0.088
Federal Order Class Prices for Milk				
		(per hundredweight)		
Class I Mover	\$19.87	\$18.04	\$19.33	\$0.54
Class III	\$15.72	\$23.34	\$19.37	-\$3.65
Class IV	\$13.36	\$13.30	\$16.70	-\$3.34
Retail Dairy Product Prices				
Fluid Whole Milk (per gallon)	\$3.535	\$3.425	\$3.188	\$0.347
Lowfat Fluid Milk (per gallon)	\$3.118	\$3.002	\$2.872	\$0.246
Cheddar Cheese (per pound)	\$5.540	\$5.589	\$5.302	\$0.238
Butter (per pound)	\$3.533	\$3.325	\$3.624	-\$0.091

Milk and Feed Prices	Nov 2020	Oct 2020	Nov 2019	2019–2020 Change
Producer Prices				
All Milk (per cwt.)	\$21.30	\$20.20	\$21.00	\$0.30
Feed Prices				
Corn (per bushel)	\$3.79	\$3.61	\$3.68	\$0.11
Soybean Meal (per ton)	\$388	\$367	\$303	\$85
Alfalfa Hay (per ton)	\$184	\$183	\$191	-\$8
DMC Feed Cost (per cwt.)	\$9.43	\$9.07	\$8.79	\$0.64
DMC Margin (per cwt.)	\$11.87	\$11.13	\$12.21	-\$0.34

Looking Ahead

The weekly National Dairy Product Sales Reports prices for cheese dropped to around \$1.60/lb at the end of December and remained there into early January. But the daily CME cash cheese market prices, a leading indicator, rose on news in early January of another round of Food Box purchases. The CME cheese futures contracts for the first quarter of 2021 followed suit, but beyond this, they recede slowly at levels well below their average during the second half of 2020.

The prospect of strong milk production growth and pandemic-depressed food service use of dairy products well into this

year continues to make any strength in the cheese and butter price outlook dependent on news of additional government food assistance purchases. The mid-January dairy futures indicated that milk prices would generally stay at around \$18/cwt until next summer, when rising prices of products other than cheese are expected to begin to lift them above this level. DMC margins are expected to remain below \$9.50/cwt until then, reflecting continued challenges in aligning demand with supply as the economy continues to suffer from the pandemic's overhang.

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