

Overview

The rapid evaporation of growth in dairy cows, milk and milk solids production dropped all three into negative territory during October. These supply-side effects have dominated the dairy situation recently and will continue to do so well into the coming year. Domestic consumption growth of all milk and dairy products has been somewhat sluggish in recent months, but U.S. dairy exports during the first ten months of 2021 have set a new volume record of 17.6 percent of U.S. milk solids production, well above this measure's second-highest year, 2020 at 16.3 percent.

The drop in production is being felt most in dry skim milk products, and to a lesser extent in butter and dry whey production. Cheese production remains the preferred channel for available milk. Product stocks are being drawn down and prices rising, as production trends change.

Commercial Use of Dairy Products

Domestic consumption of most major dairy product groups, and the milk equivalents of domestic consumption of dairy in all products, were lower relative to a year earlier during August–October than during the previous rolling three-month period. The few exceptions were other than American-type cheese and fluid milk products.

U.S. Dairy Trade

Annual U.S. export growth of dry skim ingredient products pulled back somewhat during August–October after growing vigorously in earlier periods. By contrast, export growth generally increased for cheese and milkfat products.

Imports of the major U.S. dairy import product categories were higher than a year earlier during August–October. This may be a seasonal phenomenon as opposed to a price-driven one, as world prices have generally risen by as much, if not more, than domestic prices. Milk and dairy product production has generally been dropping in the major dairy product export supplying countries, while demand from dairy-importing countries has remained strong, despite a recent lessening of China's imports and continued disruptions of shipping port operations in many countries.

Milk Production

Milk production was virtually unchanged from a year earlier during August–October. Production per cow was lower, and

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Domestic Commercial Use	Aug–Oct 2021	Aug–Oct 2020	2020–2021 Change	Percent Change
		(million pounds)		
Total Fluid Milk Products	11,032	11,348	-316	-2.8%
Yogurt	1,183	1,163	20	1.7%
Butter	572	547	24	4.5%
American-type Cheese	1,289	1,335	-47	-3.5%
All Other Cheese	1,992	1,939	53	2.7%
Total Cheese	3,281	3,275	6	0.2%
Dry Skim Milk	168	256	-88	-34.5%
All Products (milk equiv., milkfat basis)	57,043	57,348	-304	-0.5%
All Products (milk equiv., skim solids basis)	44,952	45,664	-711	-1.6%
All Products (milk equiv., total solids basis)	48,659	49,230	-572	-1.2%

Milk Production *from page 1*

cow numbers marginally higher, compared to a year ago during the period. Highlighting this, annual milk-production growth dropped from +4.65% to -0.47% between May and October, the second largest collapse in milk production over a five-month period in more than a quarter-century. Over the same period, annual growth in milk solids production dropped from +5.47 percent to -0.09 percent. The drop in the rate of annual change in U.S. milking cow numbers from +148,000 head in June to -14,000 head in October was the largest such drop over the span of four months in more than 22 years.

Dairy Products

With milk production flat but cheese production still growing, albeit at diminishing rates, available milk is being pulled away from butter and dry skim milk production, especially

for the skim products. By contrast, whey product production does not yet show such drops, as cheese production has not yet done so. Of significance for milk prices, cheddar cheese has experienced the largest growth slowdown of the major cheese types, while Italian-type production has accelerated over the past few months.

Dairy Product Inventories

Lower production is putting a heavy draw on butter and dry skim milk inventories, which were both down during October by about a third from their respective peaks earlier in the year. Whey product stocks are also down, by double digit percentages, from their earlier peaks except for whey protein concentrate and lactose. October stocks of American-type and total cheese are still holding around their 2021 peaks, but other than American type cheese stocks have been off from their earlier highs by about 5 percent in recent months.

U.S. Dairy Exports	Aug–Oct 2021	Aug–Oct 2020	2020–2021 Change	Percent Change
	(metric tons)			
Butter	10,705	5,466	5,239	96%
Anhydrous Milk Fat / Butteroil	5,796	984	4,812	489%
Cheddar Cheese	16,624	9,888	6,736	68%
American–type Cheese	16,729	9,941	6,788	68%
All Other Cheese	89,564	74,161	15,403	21%
Total Cheese	106,294	84,102	22,192	26%
Dry Skim Milk	215,871	207,085	8,787	4%
Whole Milk Powder	7,833	8,026	-193	-2%
Dry Whey	55,283	64,156	-8,874	-14%
Whey Protein Concentrate/Isolate	49,516	53,323	-3,807	-7%
Lactose	97,623	90,154	7,469	8%
Percent of U.S. Milk Solids Exported	17.6%	16.5%	1.1%	7%

U.S. Dairy Imports	Aug–Oct 2021	Aug–Oct 2020	2020–2021 Change	Percent Change
	(metric tons)			
Butter	13,290	11,405	1,885	17%
Cheese	52,445	46,156	6,289	14%
Dry Skim Milk	165	146	19	13%
MPC (all protein levels)	9,508	7,601	1,907	25%
Casein	14,158	11,398	2,760	24%
Percent of U.S. Milk Solids Imported	3.2%	2.9%	0.3%	10%

Dairy Product and Federal Order Class Prices

Monthly average NDPSR survey prices increased from October to November by almost 10 percent for butter, more than 8.5 percent for nonfat dry milk, and almost 7 percent for dry whey. Declining milk production is being felt mostly in lower production of these three products, while available milk is still being channeled to cheese production. Cheddar cheese prices were little changed in November from a month earlier. These product price movements are reflected in October to November relative changes in federal order class prices, which were up more than 10 percent for Class IV, almost

8 percent for Class II, more than 5 percent for Class I, but just over 1 percent for Class III.

U.S. average retail prices for lowfat fluid milk rose by 10 cents a gallon from October to November, according to the Bureau of Labor Statistics. BLS reported a modest increase in whole milk retail prices and lower average prices for cheese and butter during the month. In the BLS annual inflation numbers reported for November, the overall Consumer Price Index was up 6.9 percent, the CPI for all food and beverages was 5.8 percent higher than a year earlier, while the all-dairy CPI was up by 1.6 percent, with fresh whole milk 4.6 percent higher and cheese down by 0.3 percent.

Milk and Dairy Products Production	Aug–Oct 2021	Aug–Oct 2020	2020–2021 Change	Percent Change
Milk Production				
Cows (1,000 head)	9,420	9,394	26	0.3%
Per Cow (pounds)	5,870	5,883	-13	-0.2%
Total Milk (million pounds)	55,292	55,266	26	0.0%
Total Milk Solids (million pounds)	7,142	7,096	46	0.6%
Dairy Products Production		(million pounds)		
Cheese				
American Types	1,364	1,337	27	2.0%
Cheddar	949	952	-3	-0.3%
Italian Types	1,461	1,389	72	5.2%
Mozzarella	1,136	1,099	37	3.4%
Total Cheese	3,427	3,333	94	2.8%
Butter	451	464	-13	-2.8%
Dry Milk Products				
Nonfat Dry Milk	366	415	-49	-11.8%
Skim Milk Powder	183	214	-31	-14.3%
Dry Whey	225	231	-6	-2.5%
Whey Protein Concentrate	123	122	1	1.2%
Dairy Product Inventories	Oct 2021	Sept 2021	Oct 2020	2020–2021 Change
				(million pounds)
Butter	281	324	300	-6%
American Cheese	846	844	756	12%
Other Cheese	606	614	585	3%
Dry Skim Milk	230	273	245	-6%
Dry Whey	58	63	69	-16%

Milk and Feed Prices

The October margin under the Dairy Margin Coverage program was \$8.77/cwt, \$1.85/cwt higher than a month earlier, the third largest one-month increase since milk price-feed cost margins were first calculated for federal dairy safety-net programs in 2014. Together with the large increase a month earlier, the October margin was \$3.53/cwt higher than it was in August. The October DMC feed cost dropped \$0.55/cwt from a month earlier, mostly on a lower corn price, while the

milk price rose by \$1.30/cwt to \$19.70/cwt. The October margin will produce a payment of about \$0.73/cwt for coverage at the \$9.50/cwt level. When eventually topped up with the full dairy-quality alfalfa cost figured in, this payment will rise to \$0.96/cwt, and the margin will drop to \$8.54/cwt. USDA reported that, as of December 6, a total of \$1,105,755,530 was expected to be paid to 19,055 operations enrolled in the 2021 DMC program, for an average of \$58,030 per enrolled operation.

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Dairy Product and Federal Order Prices	Nov 2021	Oct 2021	Nov 2020	2020–2021 Change
NDPSR Dairy Product Prices				
		(per pound)		
Butter	\$1.950	\$1.775	\$1.456	\$0.495
Cheddar Cheese	\$1.759	\$1.770	\$2.454	-\$0.695
40-Pound Blocks	\$1.761	\$1.807	\$2.581	-\$0.820
500-Pound Barrels	\$1.727	\$1.701	\$2.293	-\$0.566
Nonfat Dry Milk	\$1.477	\$1.360	\$1.082	\$0.395
Dry Whey	\$0.583	\$0.545	\$0.383	\$0.200
Federal Order Class Prices for Milk				
		(per hundredweight)		
Class I Mover	\$17.98	\$17.08	\$18.04	-\$0.06
Class II	\$18.40	\$17.08	\$13.86	\$4.54
Class III	\$18.03	\$17.83	\$23.34	-\$5.31
Class IV	\$18.79	\$17.04	\$13.30	\$5.49
Retail Dairy Product Prices				
Fluid Whole Milk (per gallon)	\$3.671	\$3.663	\$3.425	\$0.246
Lowfat Fluid Milk (per gallon)	\$3.288	\$3.187	\$3.002	\$0.286
Cheddar Cheese (per pound)	\$5.326	\$5.396	\$5.589	-\$0.263
Butter (per pound)	\$3.477	\$3.652	\$3.325	\$0.152
Milk and Feed Prices*	Oct 2021	Sept 2021	Oct 2020	2020–2021 Change
Producer Prices				
All Milk (per cwt.)	\$19.70	\$18.40	\$20.00	-\$0.30
Feed Prices				
Corn (per bushel)	\$5.02	\$5.47	\$3.61	\$1.41
Soybean Meal (per ton)	\$325	\$344	\$367	-\$41
Alfalfa Hay (per ton)	\$247	\$244	\$194	\$53
DMC Feed Cost (per cwt.)	\$11.16	\$11.71	\$9.23	\$1.94
DMC Margin (per cwt.)	\$8.54	\$6.69	\$10.97	-\$2.44
<i>*Prices not revised for DMC calculations</i>				

Milk and Feed Prices *from page 4*

On Dec. 8, USDA announced the Supplemental DMC program to better help small and mid-sized dairy operations that have increased production over the years but were not able to enroll the additional production. The change in the DMC feed cost calculation was also announced, confirming that 100% premium alfalfa hay would be used rather than 50% premium and 50% average alfalfa hay prices. The recalculated feed costs and margins are now posted on USDA's DMC website. The signup for the 2022 DMC program began Dec. 13, 2021 and will close on February 18.

Looking Ahead

Mid-December dairy futures indicated a calendar year 2022 U.S. average milk price of about \$22.30 per hundredweight,

which would be about \$3.65 per hundredweight higher than where the 2021 average may end up. This indicates that the collective opinion of position holders in the markets is that the current tightening U.S. milk production situation will continue well into the coming year, despite the relatively strong price outlook. USDA's December dairy outlook estimates that calendar year 2022 U.S. milk production would be just 0.6 percent higher than 2021 total production. In recent months, the department has been dropping its 2022 milk production estimates by greater amounts than it has dropped its 2021 production estimates. If past seasonal trends apply, U.S. dairy exports are on track to reach 17.2 percent of total U.S. milk solids production during all of calendar year 2021, 1.2 percentage points higher than during 2020, the current highest full-year exports by this measure.

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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.