Dairy Management Inc.

Dairy Market REPORT

NMPF NATIONAL MILK PRODUCERS FEDERATION

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Overview

U.S. dairy exports are on track to achieve another calendar year record in terms of percent of U.S. milk solids production exported. Indications earlier this summer that U.S. milk production would resume growing following an extended period of below year-ago levels have recently been tempered and now suggest that any resumption of production growth will likely be modest. Milk and dairy product prices have resumed strengthening in response, as export demand continues to help firm domestic markets encountering double-digit retail dairy product price inflation. Still, with higher input costs are falling margins, factors that would normally signal boom times are being tempered by uncertainties that may not be resolved in the near term.

Commercial Use of Dairy Products

Domestic dairy product use continued to fall below year-earlier levels for most of the major dairy products and for total milk equivalents during the May–July period, as this year's relatively sudden onset of double-digit retail price inflation for dairy products continues to grow.

U.S. Dairy Trade

U.S. exports of butter and American-type cheese continued to show strong growth from year-earlier levels during May–July. Those gains helped offset recent weakness in the common major export product categories of dry skim milk and dry whey, although dry whey exports have shown annual growth during the two latest months in this period, following a year of pullbacks. Total July exports were equivalent to 18.2 percent of total milk solids production, following two months of consecutive record export levels that came in well above 19 percent by this measure, a threshold not previously exceeded.

Volumes of many of the major U.S. dairy product import categories were down slightly over a year previously, with the exception of butter, lactose, yogurt, whole milk powder and MPC. Total import volumes have been steady at the equivalent of between 3.4 and 3.5 percent of U.S. milk solids production since early last spring.

Milk Production

USDA delayed reporting a return to U.S. annual milk production growth, following many months of lower production, by revising its preliminary June number down to show a very slight drop. The preliminary June number was 0.2 percent above a year

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Domestic Commercial Use	May–Jul 2022	May–Jul 2021	2021–2022 Change	Percent Change
	(million pounds)			
Total Fluid Milk Products	10,205	10,501	-296	-2.8%
Yogurt	1,172	1,184	-12	-1.0%
Butter	471	482	-11	-2.2%
American–type Cheese	1,323	1,377	-54	-3.9%
All Other Cheese	1,940	1,916	25	1.3%
Total Cheese	3,263	3,293	-30	-0.9%
Dry Skim Milk	155	156	-2	-1.0%
All Products (milk equiv., milkfat basis)	54,373	55,544	-1,171	-2.1%
All Products (milk equiv., skim solids basis)	44,126	44,921	-795	-1.8%
All Products (milk equiv., total solids basis)	47,265	48,145	-881	-1.8%

Milk Production *from page 1*

earlier; that same increase has been shifted to its preliminary number for July. Total U.S. dairy cow numbers were still below a year ago in July, by 67,000 cows, but year-over-year drops have diminished since they peaking in April at 95,000 fewer cows. Relatively few states, particularly those that produce larger volumes of milk, are yet showing signs of accelerating growth or movement toward it. Milk solids production grew by about three-quarters of a percent faster than liquid milk production in the U.S. during May–July.

Dairy Products

American-type cheese production increased during June and July, following reduced production earlier in 2022. A key switch occurred within the general category during those two periods. Prior to June, cheddar production had been dropping significantly over a year earlier, while other American types were showing strong increases stretching well back into 2021. The two types switched these patterns in June and July, with substantial enough changes to switch the entire category to growth. By contrast, Italian-type cheese and its largest variety, Mozzarella, have both shown consistent expansion to date in 2022, with no major change with the onset of summer. U.S. butter production also switched from declining to growing in June and July, while nonfat dry milk production was up over a year earlier by over 20 percent in July, following general declines during the first half of 2022. Monthly skim milk powder production has been dropping year-over-year by double digit percentages during 2022 through July.

Dairy Product Inventories

End-of-July cold storage stocks of other than American-type cheese, and stocks of all types of cheese, reached record single-month levels for the third time this year, having previously done so in April and May. American-type cheese stocks just

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U.S. Dairy Exports	May–Jul 2022	May–Jul 2021	2021–2022 Change	Percent Change
		(metric tons)		
Butter	15,997	11,714	4,284	*37%*
Anhydrous Milk Fat/Butteroil	3,897	2,727	1,169	*43%*
Cheddar Cheese	23,963	13,013	10,950	*84%*
American–type Cheese	24,143	13,063	11,080	*85%*
All Other Cheese	97,419	88,028	9,391	*11%*
Total Cheese	121,562	101,091	20,471	*20%*
Dry Skim Milk	214,399	243,154	-28,755	*-12%*
Whole Milk Powder	11,591	10,416	1,175	*11%*
Dry Whey	54,565	55,935	-1,370	*-2%*
Whey Protein Concentrate/Isolate	63,947	53,685	10,261	*19%*
Lactose	124,284	103,906	20,378	*20%*
Percent of U.S. Milk Solids Exported	19.1%	18.2%	0.9%	*5%*

U.S. Dairy Imports	May–Jul 2022	May–Jul 2021	2021–2022 Change	Percent Change
		(metric tons)		
Butter	13,777	11,944	1,833	*15%*
Cheese	46,218	48,271	-2,052	*-4%*
Dry Skim Milk	127	117	10	*9%*
MPC (all protein levels)	13,892	13,098	794	*6%*
Casein	18,700	19,409	-709	*-4%*
Percent of U.S. Milk Solids Imported	3.5%	3.4%	0.1%	*2%*

Dairy Product Inventories *from page 2*

slightly topped those two months earlier to set a new highest level since January 1985. Manufacturers' stocks of dry skim milk were up from recent months at the end of July but remain below levels reached earlier during the COVID pandemic, while dry whey stocks have been relatively stable in recent months.

Dairy Product and Federal Order Class Prices

The August Class III price was down by more than $5.00/cwt from May's record high level. Over the same period, the Class IV price lost less than $0.20/cwt. The recent differing behaviors of these two federal order manufacturing prices are less extreme than those during 2020 but indicate that instabilities and differences in the cheese/whey and butter/dry skim milk sectors continue, driven partly by pandemic and other disruptive factors. The monthly dairy product prices that have heavily influenced the string of record high all-milk prices this past spring have all hit peaks at slightly different times. In August, cheddar cheese prices were down by 18 percent from their recent high in May, dry whey was down by more than one-third from its March high, while nonfat dry milk was off by a more modest 9 percent from

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Milk and Dairy Products Production	May–Jul 2022	May–Jul 2021	2021–2022 Change	Percent Change
Milk Production				
Cows (1,000 head)	9,417	9,497	-80	*-0.8%*
Per Cow (pounds)	6,141	6,096	45	*0.7%*
Total Milk (million pounds)	57,825	57,894	-69	*-0.1%*
Total Milk Solids (million pounds)	7,456	7,409	47	*0.6%*
Dairy Products Production		(million pounds)		
Cheese				
American Types	1,410	1,406	4	*0.3%*
Cheddar	1,003	1,003	0	*0.0%*
Italian Types	1,461	1,418	43	*3.0%*
Mozzarella	1,164	1,110	54	*4.9%*
Total Cheese	3,494	3,436	59	*1.7%*
Butter	492	487	5	*1.0%*
Dry Milk Products				
Nonfat Dry Milk	528	529	-1	*-0.2%*
Skim Milk Powder	135	167	-32	*-19.4%*
Dry Whey	250	235	16	*6.6%*
Whey Protein Concentrate	129	118	12	*9.8%*

Dairy Product Inventories	Jul 2022	Jun 2022	Jul 2021	2021–2022 Change
		(million pounds)		
Butter	314	331	396	*-21%*
American Cheese	860	847	818	*5%*
Other Cheese	663	660	632	*5%*
Dry Skim Milk	345	325	323	*7%*
Dry Whey	69	70	67	*3%*

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

its recent April high. By contrast, the August butter price set a new record for the monthly NDPSR price since the series began, when federal order reform was implemented, in January 2000.

The general inflation rate fell again in August, to 8.3 percent over a year ago from 9.1 percent two months earlier. But dairy product price inflation continued to increase by this measure. Increases in their consumer price indices over a year earlier ranged from 13.5 percent for cheese to 24.6 percent for butter.

Dairy Product and Federal Order Prices	Aug 2022	Jul 2022	Aug 2021	2021–2022 Change
NDPSR Dairy Product Prices		(per pound)		
Butter	$2.979	$2.946	$1.700	*$1.279*
Cheddar Cheese	$1.976	$2.202	$1.568	*$0.408*
40-Pound Blocks	$1.948	$2.162	$1.690	*$0.258*
500-Pound Barrels	$1.970	$2.205	$1.437	*$0.533*
Nonfat Dry Milk	$1.669	$1.800	$1.266	*$0.403*
Dry Whey	$0.505	$0.548	$0.562	*-$0.057*
Federal Order Class Prices for Milk		(per hundredweight)		
Class I Mover	$27.89	$25.87	$16.90	*$10.99*
Class II	$26.91	$26.66	$16.51	*$10.40*
Class III	$20.10	$22.52	$15.95	*$4.15*
Class IV	$24.81	$25.79	$15.92	*$8.89*
Retail Dairy Product Prices				
Fluid Whole Milk (per gallon)	$4.194	$4.156	$3.560	*$0.634*
Lowfat Fluid Milk (per gallon)	$3.888	$3.874	$3.172	*$0.716*
Cheddar Cheese (per pound)	$5.995	$5.855	$5.336	*$0.659*
Butter (per pound)	$4.699	$4.552	$3.634	*$1.065*

Milk and Feed Prices	Jul 2022	Jun 2022	Jul 2021	2021–2022 Change
Producer Prices				
All Milk (per cwt.)	$25.70	$26.90	$17.80	*$7.90*
Feed Prices				
Corn (per bushel)	$7.25	$7.37	$6.12	*$1.13*
Soybean Meal (per ton)	$468	$446	$365	*$103*
Premium Alfalfa Hay (per ton)	$333	$277	$232	*$101*
Feed Prices (per cwt of milk)				
Corn	$7.78	$7.91	$6.57	*$1.21*
Soybean Meal	$3.44	$3.28	$2.68	*$0.75*
Premium Alfalfa Hay	$4.56	$3.79	$3.18	*$1.38*
DMC Feed Cost* (per cwt.)	$15.78	$14.98	$12.43	*$3.35*
DMC Margin* (per cwt.)	$9.92	$11.92	$5.47	*$4.45*
**DMC calculations are not revised*				

Milk and Feed Prices

The July DMC margin was $9.92/cwt, $2.00/cwt less than June's. The rather uncharacteristically large drop was driven by a $1.20/cwt lower July U.S. average all-milk price and an $0.80/cwt higher feed cost. The higher feed cost was due almost entirely by an unusually large monthly increase in the average price of premium alfalfa hay of $0.77/cwt of milk in the feed cost formula. The additional 3-cent increase in the July DMC feed cost was the net effect of a $0.16/cwt of milk monthly increase in the price of soybean meal that was mostly offset by a lower price for corn. The July milk price was still high by historic standards, but July milk and dairy product prices were mostly down from their earlier summer highs, driven by a combination of consumer reaction to this year's rapid rise in retail dairy product prices and hints that U.S. milk production was beginning to grow again following the string of months with annually-lower milk output that stretch back to last fall.

Looking Ahead

The long-lasting contraction of U.S. milk production, which stretches back to June 2021, when production growth began to collapse from the previous month's +4.6 percent annual growth, seems poised to end, despite its one-month postponement to July. Even if it sticks this time, it is likely to be moderate. Few states seem to be showing signs of anything that could be considered explosive growth, and milk prices are receding from their recent highs at the same time milk production costs continue to rise. But the premium alfalfa price rise is the only thing in the July DMC margin formula that could be considered explosive.

USDA seems to have been thinking along these same lines. From late spring, it had been steadily reducing its monthly World Agricultural Supply and Demand Estimates (WASDE) forecasts of 2022 and 2023 calendar year milk production, but then it markedly reversed course in its August forecasts. In September USDA reversed course again and resumed lowering its milk production forecasts for both years. It currently projects 2022 production to just edge above 2021 by 0.1 percent, and 2023 production to be up by 1.0 percent above this year. "Slower growth in cow numbers is carried through late 2022 and is expected to carry into 2023" is cited as one reason for its return to a conservative outlook for the nation's milk supply. Despite this resumed outlook, its current 2022 milk production forecast implies it expects production to grow by 1.4 percent during the remaining five months of this year compared with the same period in 2021.

The July drop in the DMC margin put it within striking distance of the highest $9.50/cwt (Tier 1) coverage level under the program. Available forecasts currently indicate that small margin coverage payments may be generated for $9.50/cwt coverage in August and September this year, which would at least partially offset the modest premium costs for that coverage.

In its September WASDE report, the department raised its 2022 and 2023 forecasts from a month before for butter, nonfat dry milk, Class IV and the all-milk prices, but not for its cheddar cheese, dry whey and Class III price forecasts. The department's price forecasts were in almost all cases more bearish than those of the CME future prices on the day of the September WASDE release, more so for the 2023 forecasts than for this year's.

Overall, the dairy markets aren't sending clear signals indicating any marked change in direction from recent months: Exports are booming and prices are high, but so are input costs and consumer expenses. This is creating an environment for dairy that, while stabilizing cow numbers and production, feels somewhat precarious. Historically high milk prices certainly don't signal a bust in the industry, but they also don't feel as much like a boom as would normally be expected. As the post-pandemic ground has shifted for dairy, farmers are still struggling to find firm footing in an industry that may be reflecting profound changes in its structure.

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Dairy Management Inc.™ 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.