

## Overview

*Reviewing 2018, the year began on a relatively promising note, with dairy exports starting off at a pace that would have set a record for the whole year. But the mid-year onset of the tariff wars with China and Mexico, followed by an uncharacteristic weakness in cheese consumption, weighed heavily on milk prices. By year's end, futures markets reflected greater optimism about the coming year, particularly for cheese prices. Meanwhile, a new farm bill in which dairy saw the biggest gains of any commodity significantly strengthened the federal dairy safety net.*

## Commercial Use of Dairy Products

On a rolling three-month basis, U.S. sales of all fluid milk items have declined steadily year-over-year for 7.75 years, at an average rate of 1.9 percent. Fluid sales during 2018 to date were down by 2.2 percent over the first 10 months of 2017. Weaker sales during September and October caused domestic use of American-type cheese during the August–October period to drop well below their average increase of 0.4 percent during the first eight months of 2018. By contrast, August–October domestic use of other than American-type cheese was up by 5.5 percent, well above its 3.5 percent average increase during the first 10 months of 2018.

## U.S. Dairy Trade

When the final numbers are available and reported, U.S. dairy exports in 2018 may set a record for percent of domestic production exported. During the first 10 months of the year, the

United States exported 16.3 percent of its domestic production of milk solids, which would outpace the current calendar-year record of 15.4 percent of solids exported in 2013. U.S. dairy export growth had been stagnant and even declining by this measure in the years since that record was set. However, much of the export rebound took place during the first half of 2018, before China and Mexico imposed retaliatory tariffs. Of products affected by those tariffs, monthly average U.S. exports of all dairy products to China are down by a third in both volume and value between the first half of 2018 and the second half through October. For U.S. cheese exports to Mexico, the corresponding decline was just over 25 percent. In contrast, U.S. exports of all dairy products to Mexico other than cheese have risen in the second half of the year, and total U.S. dairy exports other than to China and cheese to Mexico are down by just 4 percent in volume compared to the first half of 2018.

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Domestic Commercial Use	Aug–Oct 2018	Aug–Oct 2017	2017–2018 Change	Percent Change
	(million pounds)			
Total Fluid Milk Products	11,861	12,171	-310	-2.5%
Butter	513	506	7	1.4%
American-type Cheese	1,255	1,306	-51	-3.9%
All Other Cheese	1,946	1,845	102	5.5%
Total Cheese	3,201	3,150	51	1.6%
Nonfat Dry Milk / Skim Milk Powders	167	187	-20	-10.7%
All Products (milk equiv., milkfat basis)	55,878	55,475	403	0.7%
All Products (milk equiv., skim solids basis)	44,984	44,386	598	1.3%

**U.S. Dairy Trade** *from page 1*

U.S. dairy imports of dry skim ingredient products in the August–October timeframe were down significantly from the same period the previous year, but butter imports rose significantly, although on a smaller volume.

## Milk Production

There were, on average, about 30,000 fewer dairy cows in the United States during August–October this year than a year earlier, while U.S. milk production was just over 1 percent higher over that time. Monthly U.S. cow numbers have been below year-earlier levels since June, the first sustained reduction in the national dairy herd in over five years. The rapid increase in the average milk solids content of the U.S. milk supply during 2016 and 2017 has abated in recent months, leading growth rates of total milk solids production to realign with growth in

raw milk production in recent months. At the state level, growth in milk production is either negative or trending down in every state except Idaho, Colorado and South Dakota.

## Dairy Products

Production of all cheese in the United States outpaced total commercial use of U.S. cheese during August–October, due to excess supply compared with demand for American-type cheese. Demand growth for all other types of cheese, largely Italian types, outpaced production growth during the period. Skim milk powder production was up during the period at the expense of nonfat dry milk production, reflecting the continued strong export growth in dried skim milk products.

## Dairy Product Inventories

Inventories of butter and other than American-type cheese dropped from September to October, but still did not fall below

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U.S. Dairy Exports	Aug–Oct 2018	Aug–Oct 2017	2017–2018 Change	Percent Change
		(metric tons)		
Butter	6,425	5,293	1,132	21%
Anhydrous Milk Fat/Butteroil	7,027	1,939	5,088	262%
Cheddar Cheese	10,440	10,833	-393	-4%
American-type Cheese	10,550	10,984	-434	-4%
Total Cheese	79,671	84,275	-4,605	-5%
Nonfat Dry Milk/Skim Milk Powder	175,566	140,392	35,174	25%
Whole Milk Powder	13,860	7,891	5,970	76%
Dry Whey	84,934	95,787	-10,853	-11%
Whey Protein Concentrate/Isolate	45,867	46,495	-627	-1%
Lactose	95,009	92,086	2,923	3%
Percent of Milk Solids Exported	15.8%	14.7%	1.1%	7%

U.S. Dairy Imports	Aug–Oct 2018	Aug–Oct 2017	2017–2018 Change	Percent Change
		(metric tons)		
Butter	12,016	8,011	4,005	50%
Cheese	47,718	46,677	1,042	2%
Nonfat Dry Milk/Skim Milk Powder	343	454	-112	-25%
MPC (all protein levels)	5,577	8,069	-2,492	-31%
Casein	10,931	15,104	-4,174	-28%
Percent of Milk Solids Imported	3.1%	3.3%	-0.1%	-4%

**Dairy Product Inventories** *from page 2*

their levels of a year earlier. Stocks of American-type cheese as of Oct. 31 were up over both the previous month and the previous year, reflecting weakness in commercial use compared with production. Strong export growth continues to draw down domestic stocks of nonfat dry milk.

## Dairy Product and Federal Order Class Prices

Butter prices reported by USDA-AMS for November were essentially unchanged from last month and last year, but Cheddar cheese

prices were down significantly over both, reflecting weakened supply-demand balance and growing stocks. Perhaps less noticed has been the steady improvement in U.S. nonfat dry milk and dry whey prices over the past year. Domestic prices of both of these dry skim ingredient products are tied to their respective world market prices, but each have risen by about \$0.20 a pound from the beginning of 2018. These are improvements of 27 percent and 83 percent, respectively, from those recent lows. Although these two prices do not have as great an impact on milk prices received by dairy farmers as butter and Cheddar cheese prices, their improvement this year has helped mitigate the effects of steady butter prices and lower cheese prices.

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Milk and Dairy Products Production	Aug–Oct 2018	Aug–Oct 2017	2017–2018 Change	Percent Change
<b>Milk Production</b>				
Cows (1,000 head)	9,370	9,401	-31	-0.3%
Per Cow (pounds)	5,713	5,635	78	1.4%
Total Milk (million pounds)	53,531	52,974	557	1.1%
Total Milk Solids (million pounds)	6,814	6,736	78	1.2%
<b>Dairy Products Production</b>		(million pounds)		
<b>Cheese</b>				
American Types	1,277	1,248	29	2.3%
Cheddar	898	898	0	0.0%
Italian Types	1,378	1,324	53	4.0%
Mozzarella	1,086	1,016	70	6.9%
Total Cheese	3,252	3,158	94	3.0%
Butter	413	410	3	0.6%
<b>Dry Milk Products</b>				
Nonfat Dry Milk	357	416	-59	-14.3%
Skim Milk Powder	132	100	32	31.8%
Dry Whey	237	266	-29	-10.9%
Whey Protein Concentrate	125	118	7	6.0%

Dairy Product Inventories	Oct 2018	Sept 2018	Oct 2017	2017–2018 Change
		(million pounds)		
Butter	231	283	218	6%
American Cheese	814	804	740	10%
Other Cheese	559	574	528	6%
Nonfat Dry Milk	253	262	317	-20%

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

Retail prices for fluid whole milk have declined significantly over the past year, but most of that reduction occurred during the first two months of 2018. Retail prices of Cheddar cheese trended in the opposite direction during last year.

## Milk and Feed Prices

Following a record seven months below the \$8.00/cwt. level, the monthly margin under the dairy Margin Protection Program (MPP) rose above that level in September. The seven-month period of margins under \$8.00/cwt. triggered over a quarter-billion dollars in payments to the over 21,000 U.S. dairy operations enrolled in

the MPP in 2018. The U.S. average all milk price was up by \$0.70/cwt. from September to October, generating all of the MPP margin increase between those months, as minor changes in the prices of the feed ingredients in the feed cost component of the margin formula exactly offset each other.

## Looking Ahead

Dairy futures at the turn of the year showed signs of improvement in the milk price outlook for 2019. Just a month earlier, they indicated an average all-milk price for next year about \$1.10/cwt. above the 2018 price average, which is likely to come in at about \$16.20/cwt., the lowest since the price disaster year of 2009. By

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Dairy Product and Federal Order Prices	Nov 2018	Oct 2018	Nov 2017	2017–2018 Change
<b>AMS Commodity Prices</b>		(per pound)		
Butter	\$2.268	\$2.281	\$2.281	-\$0.013
Cheese	\$1.446	\$1.569	\$1.762	-\$0.315
Nonfat Dry Milk	\$0.886	\$0.874	\$0.755	\$0.131
Dry Whey	\$0.463	\$0.447	\$0.359	\$0.104
<b>Class Prices for Milk</b>		(per hundredweight)		
Class I Mover	\$15.52	\$16.33	\$16.41	-\$0.89
Class III	\$14.44	\$15.53	\$16.88	-\$2.44
Class IV	\$15.06	\$15.01	\$13.99	\$1.07
<b>Retail Dairy Product Prices</b>				
Fluid Whole Milk (per gallon)	\$2.877	\$2.913	\$3.150	-\$0.273
Cheddar Cheese (per pound)	\$5.229	\$5.158	\$5.006	\$0.223
Butter (per pound)	\$3.953	\$4.111	NA	NA

Milk and Feed Prices	Oct 2018	Sept 2018	Oct 2017	2017–2018 Change
<b>Producer Prices</b>				
All Milk (per cwt.)	\$17.40	\$16.70	\$17.90	-\$0.50
<b>Feed Prices</b>				
Corn (per bushel)	\$3.41	\$3.39	\$3.26	\$0.15
Soybean Meal (per ton)	\$319	\$318	\$315	\$4
Alfalfa Hay (per ton)	\$178	\$180	\$152	\$26
2014 Farm Bill Feed Cost (per cwt.)	\$8.44	\$8.44	\$7.90	\$0.55
2014 Farm Bill Margin (per cwt.)	\$8.96	\$8.26	\$10.00	-\$1.05

### Looking Ahead from page 4

the first week of January, the outlook had improved to a gain of \$1.60/cwt. over 2018. The futures are projecting a particularly strong recovery for Cheddar cheese prices, whose weakness during the later months of 2018 weighed heavily on milk prices. The 2018 Farm Bill, enacted in late December, provides further improvements to the federal dairy safety net. Among other changes, it permits dairy producers to enroll their first 5 million

pounds of production history in the Dairy Margin Coverage (DMC) program (the rebranded MPP) for margin protection coverage up to \$9.50/cwt. while maintaining premiums on those pounds at low levels, similar to those in effect during 2018. The DMC margin, calculated the same as the previous MPP margin, is likely to remain in the \$8.00-\$9.50 range for most of 2019, making the new program attractive to producers this coming year.

Peter Vitaliano  
National Milk  
Producers Federation  
pvitaliano@nmpf.org  
www.nmpf.org



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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.