

## Overview

*U.S. dairy exports continue to improve. Export volumes were up during August–October compared to a year earlier for most major product categories.*

*Nonfat dry milk and dry whey prices have been rising due to an improving world market for dairy ingredients. This has helped lift U.S. producer milk prices, starting from when they bottomed out in May. However, the average all-milk price dropped by 70 cents a hundredweight from September to October, mostly due to a drop in Class III and Class IV prices as domestic butter and cheese prices became somewhat volatile heading into the holiday season. The bimonthly margin under the Margin Protection Program (MPP) for the September–October period was \$9.16 per hundredweight.*

## Commercial Use of Dairy Products

During July–September, sales of fluid milk products were 0.5 percent below the same period a year earlier. Within that, organic milk sales – 5.3 percent of the total – were up 5.2 percent, while conventional milk sales were down 0.8 percent. For conventional milk, whole milk sales (including flavored) were up 5.2 percent, while reduced-fat milk sales (including skim) were down 3.7 percent. Commercial use of butter and cheese grew, while nonfat dry milk and skim milk powder were down by 20 percent, largely reflecting the revival of U.S. exports. More generally, increased exports of many ingredient products reduced total domestic use of skim milk solids by 0.8 percent.

## U.S. Dairy Trade

The dairy export situation continues to improve. Butter exports during August–October were up nearly 50 percent from a year earlier after being down by double-digit percentages for at least two years. Total cheese exports eked out a small gain following similar losses. Skim milk powder and dry whey exports continued to rebound, while lactose exports registered gains for the first time in 2016. Total dairy exports during August–October were equivalent to 15.5 percent of milk solids production, compared to 13.8 percent a year earlier.

Imports during August–October were lower than a year earlier for butter, cheese, nonfat dry milk/skim milk powder and casein.

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Domestic Commercial Use	Jul–Sept 2016	Jul–Sept 2015	2015–2016 Change	Percent Change
	(million pounds)			
Total Fluid Milk Products	12,020	12,080	-60	-0.5%
Butter	471	469	2	0.4%
American-type Cheese	1,160	1,141	19	1.7%
All Other Cheese	1,775	1,729	46	2.7%
Nonfat Dry Milk /Skim Milk Powders	211	263	-52	-19.9%
All Products (milk equiv., milkfat basis)	53,240	52,423	818	1.6%
All Products (milk equiv., skim solids basis)	43,995	44,340	-345	-0.8%

## U.S. Dairy Trade from page 1

Nevertheless, imports of all dairy products rose as a percent of total milk solids production. Concentrates and isolates of milk and whey protein accounted for much of this increase.

## Milk Production

U.S. milk production was up by 2.1 percent from a year earlier during August-October. This was the fourth-straight moving three-month period during which the year-over-year rate of growth increased. In October alone, growth from a year earlier was 2.5 percent, up from 2.1 percent in September and 1.7 percent in August. Consistent with earlier months in the recent milk production buildup, the main driver of the increase has been the recovery in a few key states from substantial losses earlier in the year, as opposed to more rapid growth in states already experiencing steady increases. California and New Mexico, in

particular, have both recovered from large losses during most of the year. With a 1.8 percent growth rate in October, California showed positive monthly growth for the first time all year. Michigan, New York and Wisconsin have all seen sizeable increases throughout 2016, but their growth rates are now either steady or slowing. Only Idaho, Iowa and Kansas have steadily increased their production gains this year, while Texas has moved from sizeable losses at the beginning of the year to sizeable gains recently. Only three of the 23 states for which USDA reports milk production monthly showed losses in October, and the total loss from those three states was tiny compared with the gain nationally during the month.

## Dairy Products

Patterns of cheese production have been quite stable this year, with American-type cheese running slightly below a year ago

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U.S. Dairy Exports	Aug–Oct 2016	Aug–Oct 2015	2015–2016 Change	Percent Change
		(metric tons)		
Butter	4,885	3,331	1,554	47%
Anhydrous Milk Fat /Butteroil	547	526	21	4%
Cheddar Cheese	5,466	6,775	-1,309	-19%
American-type Cheese	5,550	7,192	-1,643	-23%
Total Cheese	69,550	68,513	1,038	2%
Nonfat Dry Milk /Skim Milk Powder	159,590	139,908	19,682	14%
Whole Milk Powder	14,289	8,680	5,609	65%
Dry Whey	90,153	63,041	27,112	43%
Whey Protein Concentrate/Isolate	46,005	38,599	7,406	19%
Lactose	95,625	88,953	6,673	8%
Percent of Milk Solids Exported	15.5%	13.8%	1.7%	12%

  

U.S. Dairy Imports	Aug–Oct 2016	Aug–Oct 2015	2015–2016 Change	Percent Change
		(metric tons)		
Butter	5,202	6,005	-803	-13%
Cheese	49,891	53,481	-3,589	-7%
Nonfat Dry Milk /Skim Milk Powder	14	907	-893	-98%
MPC (all protein levels)	12,029	9,918	2,112	21%
Casein	15,594	16,983	-1,389	-8%
Percent of Milk Solids Imported	3.8%	3.5%	0.3%	8%

## Dairy Products from page 2

and Italian-type cheese up by approximately 4 percent. Growth in butter production has been slowing, while nonfat dry milk production turned up from a year earlier during August–October.

## Dairy Product Inventories

Following seasonal patterns, commercial inventories of butter continued to fall sharply in October from a month earlier, while cheese inventories declined modestly. Butter stocks at the end of October were 94 million pounds less than two months earlier. Nonfat dry milk stocks were 25 percent above a year ago, after being even with or below a year ago for much of 2016.

## Dairy Product and Federal Order Class Prices

Monthly butter, cheese and dry whey prices surveyed by USDA's Agricultural Marketing Service made gains in November from a month earlier. The nonfat dry milk price eased back slightly, following six months of increases, while the dry whey price was up for the seventh straight month. Steady improvements in world prices have gradually lifted U.S. prices for these two major food ingredients, thereby helping to boost U.S. producer milk prices. Butter and cheese prices have been much more volatile. Cheese dropped 17 cents a pound in October from a month earlier, but then gained back 18 cents in November. This

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Milk and Dairy Products Production	Aug–Oct 2016	Aug–Oct 2015	2015–2016 Change	Percent Change
<b>Milk Production</b>				
Cows (1000 head)	9,337	9,317	20	0.2%
Per Cow (pounds)	5,591	5,490	101	1.8%
Total Milk (million pounds)	52,204	51,150	1,054	2.1%
<b>Dairy Products Production</b>	(million pounds)			
<b>Cheese</b>				
American Types	1,164	1,167	-3	-0.3%
Cheddar	827	830	-2	-0.3%
Italian Types	1,295	1,243	52	4.2%
Mozzarella	1,004	974	30	3.0%
Total Cheese	3,017	2,972	46	1.5%
Butter	408	410	-2	-0.4%
<b>Dry Milk Products</b>				
Nonfat Dry Milk	383	362	21	5.8%
Skim Milk Powder	128	106	22	20.8%
Dry Whey	236	239	-3	-1.2%
Whey Protein Concentrate	106	119	-13	-11.0%

  

Dairy Product Inventories	Oct 2016	Sept 2016	Oct 2015	2015–2016 Change
	(million pounds)			
Butter	228	269	179	27%
American Cheese	730	743	697	5%
Other Cheese	486	493	449	8%
Nonfat Dry Milk	225	216	180	25%

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

contributed to a \$1.57 per hundredweight drop in the Class III price from September to October and a subsequent rise of \$1.94 per hundredweight in November. The November Class IV price gained 10 cents a hundredweight from a month earlier, the combined result of a 4.5-cent rise in the butter price and a 1-cent decline in the nonfat dry milk price.

## Milk and Feed Prices

The October all-milk price was down 70 cents per hundredweight from a month earlier, following four months of gains. A major factor was the decline in the Class III price from September to

October. Also contributing was a 59-cent-per-hundredweight decline in the Class IV price. The October U.S. average corn price rose by 7 cents a bushel from a month earlier, while prices of the other two ingredients in the MPP feed cost formula declined. Combined, these changes resulted in a small drop in the October MPP feed cost. The monthly MPP margin fell by 64 cents per hundredweight, mostly due to the lower all-milk price. The bimonthly margin for September–October was \$9.16 per hundredweight, 74 cents higher than the July–August margin.

The average retail whole milk price has risen by 23 cents a gallon in the three months through October. This compared to a decline of approximately 80 cents a gallon from November 2014 to July 2016.

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Dairy Product and Federal Order Prices	Nov 2016	Oct 2016	Nov 2015	2015–2016 Change
<b>AMS Commodity Prices</b>		(per pound)		
Butter	\$1.909	\$1.864	\$2.800	-\$0.891
Cheese	\$1.760	\$1.583	\$1.650	\$0.109
Nonfat Dry Milk	\$0.912	\$0.922	\$0.837	\$0.075
Dry Whey	\$0.369	\$0.330	\$0.234	\$0.135
<b>Class Prices for Milk</b>		(per hundredweight)		
Class I Mover	\$14.78	\$16.60	\$16.48	-\$1.70
Class III	\$16.76	\$14.82	\$15.30	\$1.46
Class IV	\$13.76	\$13.66	\$16.89	-\$3.13

  

Milk and Feed Prices	Oct 2016	Sept 2016	Oct 2015	2015–2016 Change
<b>Producer Prices</b>				
All Milk (per cwt.)	\$16.60	\$17.30	\$17.70	-\$1.10
<b>Feed Prices</b>				
Corn (per bushel)	\$3.29	\$3.22	\$3.67	-\$0.38
Soybean Meal (per ton)	\$323	\$338	\$328	-\$5
Alfalfa Hay (per ton)	\$135	\$137	\$155	-\$20
2014 Farm Bill Feed Cost (per cwt.)	\$7.75	\$7.82	\$8.47	-\$0.72
2014 Farm Bill Margin (per cwt.)	\$8.85	\$9.48	\$9.23	-\$0.38
<b>Retail Dairy Product Prices</b>				
Fluid Milk (per gallon)	\$3.292	\$3.229	\$3.338	-\$0.046
Cheddar Cheese (per pound)	\$5.352	\$5.023	\$5.478	-\$0.126

### Milk and Feed Prices *from page 4*

The average retail Cheddar cheese price has also fallen rather steadily over the past few years, but then showed a sharp increase of 33 cents a pound in October.

## Looking Ahead

The 70-cent drop in the October all-milk price was largely predicted by the changes in the previously announced October federal order class prices. But the November federal order prices indicate this will reverse, with the all-milk price likely snapping back to approximately its September level of \$17.30 per hundredweight

in November. As of mid-December, the CME dairy futures were suggesting that the all-milk price will move up fairly steadily throughout 2017 and average about \$19 per hundredweight for the year. In December, USDA raised its monthly forecast of the U.S. average all-milk price for 2017 by 50 cents, to \$17.25 per hundredweight. At the same time, futures-based forecasts of the MPP margin, including USDA's, ranged from around \$10.30–\$11 per hundredweight for 2017. Starting in January, however, rising U.S. milk production will test the resilience of the relatively robust butter and cheese prices that have generally prevailed during the 2016 holidays.

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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.