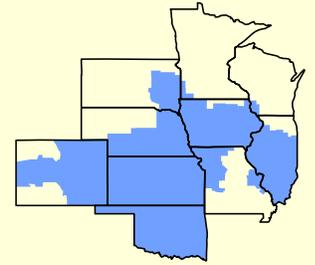


MAY 2017

Marketing Service

Bulletin

Facilitating the efficient marketing of milk and dairy products.



CENTRAL MARKETING AREA



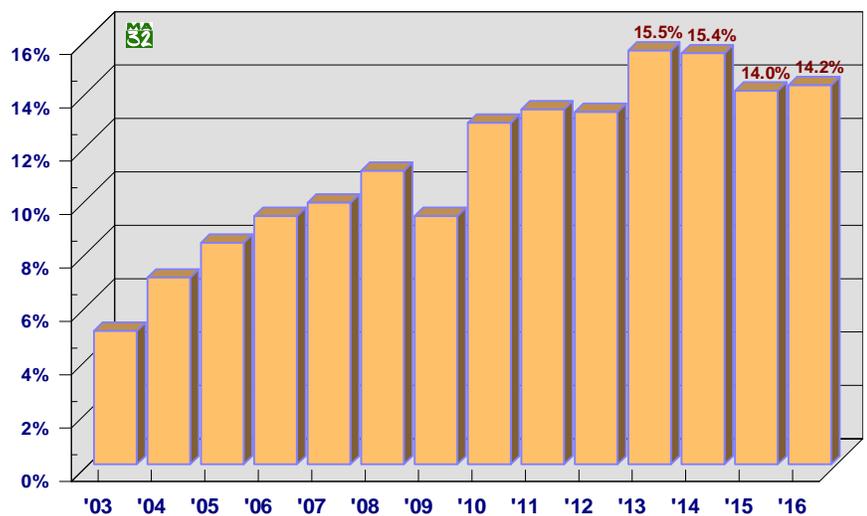
The international marketplace is increasingly important to U.S. agriculture, as revealed by a cursory examination of foreign trade data*. Agriculture has recorded a positive trade balance every year since 1960, and the dollar value of agricultural exports has increased in 12 of the last 14 years. Record high dollar export levels were achieved for five consecutive years from 2010 through 2014, peaking at \$150.0 billion. The value of agriculture exports decreased by 11.3% in 2015 to \$133.1 billion, but rebounded last year to \$134.9 billion (+1.4%). The 2016 value of agricultural exports was greater than every year prior to 2011, and U.S. agriculture posted a \$20.3 billion trade surplus last year.

The importance and influence of international trade is a relatively recent phenomenon for the U.S. dairy industry. The percentage of total milk production represented by dairy product exports was small prior to 2004, typically 5% or less. Moreover, the U.S. was often a net importer in the years prior to those depicted by the graphs on this page.

U.S. Dairy Export Volume

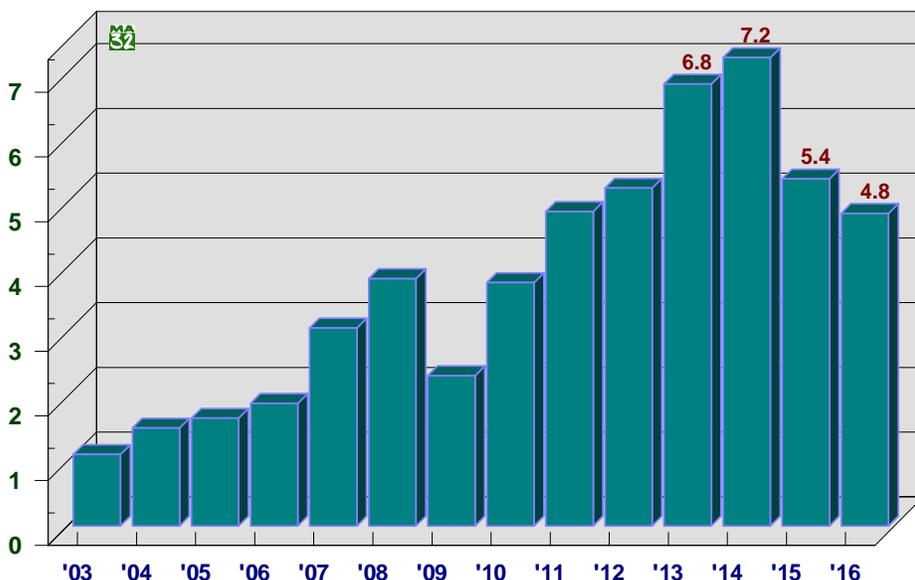
(Total Solids)

As a Percentage of Total Milk Solids Produced



U.S. Dairy Export Value

(Billion Dollars)



Exports have taken on an increasingly more important role for the U.S. dairy industry in recent years, as indicated by the top graph on this page. Since 2005, export volume as a percentage of total solids produced has been above 8.0% each year, and has been greater than 11.0% in eight of the last nine years. Dairy exports were equivalent to 14.2% of all U.S. milk solids produced in 2016, down by 1.3 percentage points from the record high 15.5% recorded in 2013. Over the most recent five years, dairy exports have averaged approximately 14.5% of total production on a total solids basis. This amount is equivalent to approximately one full day's production each week.

* Data sources include the Economic Research Service (ERS) and the Foreign Agriculture Service (FAS) of the USDA, along with the U.S. Dairy Export Council (USDEC).

U.S. dairy export sales declined in 2015 and 2016, ending a streak of five consecutive years of expansion. The drop-off in export value was attributable to the weakest global dairy market in more than a decade combined with a strong U.S. dollar. After reaching an all-time high \$7.2 billion in 2014, the year-over-year value of dairy exports decreased more than 25% in 2015, and were down approximately 10% last year, falling to \$4.8 billion. Despite this decline, the 2016 value of dairy exports ranked sixth all-time and were greater than every year prior to 2011. The 2016 total was more than 28% greater than that of six years ago (2010), and was more than double the 2009 amount. In addition, 2016 dairy exports were more than four times greater than the value during 2000 - 2003 when they totaled a little over \$1 billion per year. The bottom graph on page one depicts annual monetary values of all dairy export sales from 2003 through 2016.

The top graph on this page depicts 2016 export values for selected dairy products. Cheese exports ranked first with sales of \$1.198 billion, followed closely by nonfat dry milk (NDM) at \$1.134 billion. Whey (\$0.828 billion), lactose (\$0.286 billion), infant formula (\$0.274 billion), and ice cream (\$0.178 billion) were the next largest sales categories.

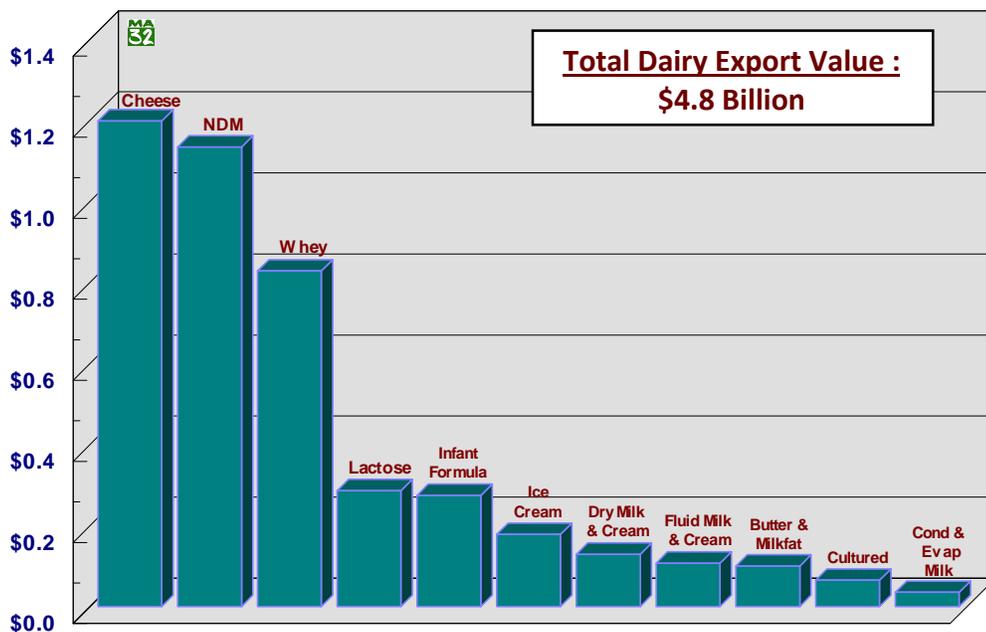
Only four of these 11 product categories recorded increases comparing 2016 to 2015: dry milk and cream (+55.9%); butter and milkfat (+21.7%); fluid milk and cream (+20.0%); and cultured products (+5.7%). NDM sales decreased the most in absolute terms, falling by \$0.251 billion (-18.1%), followed cheese with a decrease of \$190.0 billion (-13.7%). All other categories that registered losses had declines of less than 10%.

The pie chart on this page depicts the proportion of 2016 U.S. dairy export sales by country/region. The number one destination for U.S. dairy products in 2016 was Mexico with sales totaling \$1.218 billion; however, this was down by 5% compared with the previous year. Southeast Asia was the number two destination, with \$670.8 million in dairy product sales, down 21% compared with 2015.

Canada ranked third for the second consecutive year with sales of \$631.6 million in 2016. Sales to Canada were 14% above the previous year, and Canada was one of only two of the top ten dairy export destinations to post a year-over-year increase. China ranked fourth in 2016, but sales declined 15% compared with 2015, falling to \$384.3 million. Other major U.S. dairy product customers during 2016 included South America with \$280.3 million (-0.2%), South Korea with \$231.5 million (-24%), the Caribbean with \$214.0 million (+1%), Japan with \$205.7 million (-25%), Middle East/North Africa with \$194.5 million (-26%), and Oceania with \$171.9 million (-21%). Sales to all other markets comprised approximately 12.9% of U.S. dairy exports during 2016, up marginally from 12.6% in 2015.

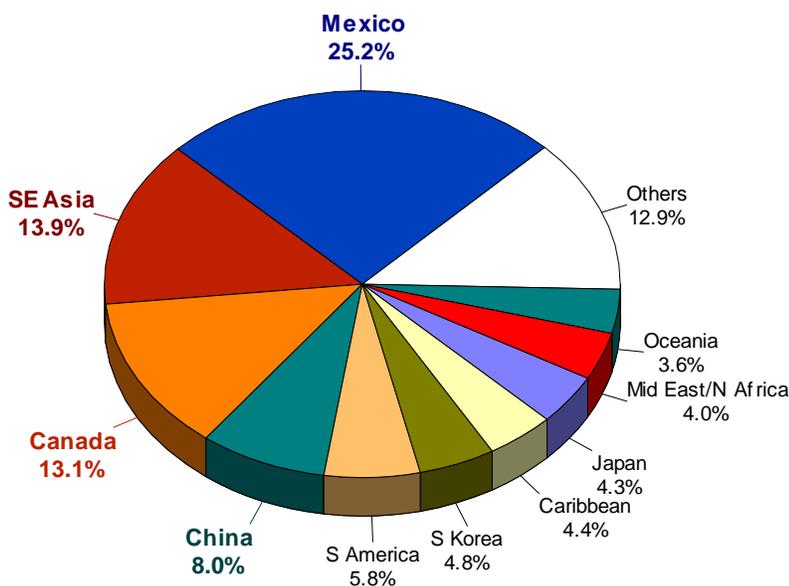
U.S. 2016 Export Value for Selected Dairy Products

(Billion Dollars)



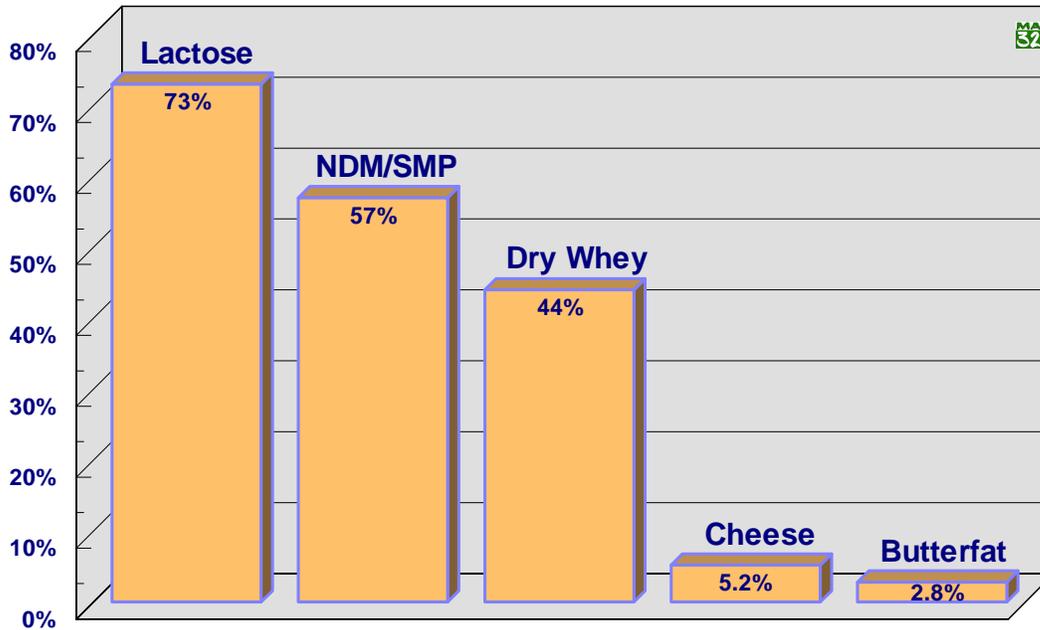
U.S. Dairy Export Sales

Percentage of 2016 Total Sales (Dollars)



U.S. 2016 Export Volume for Selected Dairy Products

As a Percentage of Total Production



The top graph on this page details the proportion of total 2016 production represented by exports for several dairy products. Exports accounted for more than half of total production for two product categories – lactose and nonfat dry milk/skim milk powder (NDM/SMP). Lactose export volumes were nearly three-fourths of total production, while exports accounted for 57% of the NDM/SMP total. Exports as a proportion of total production for NDM/SMP, dry whey, and butterfat were all higher comparing 2016 with 2015, while the proportions for

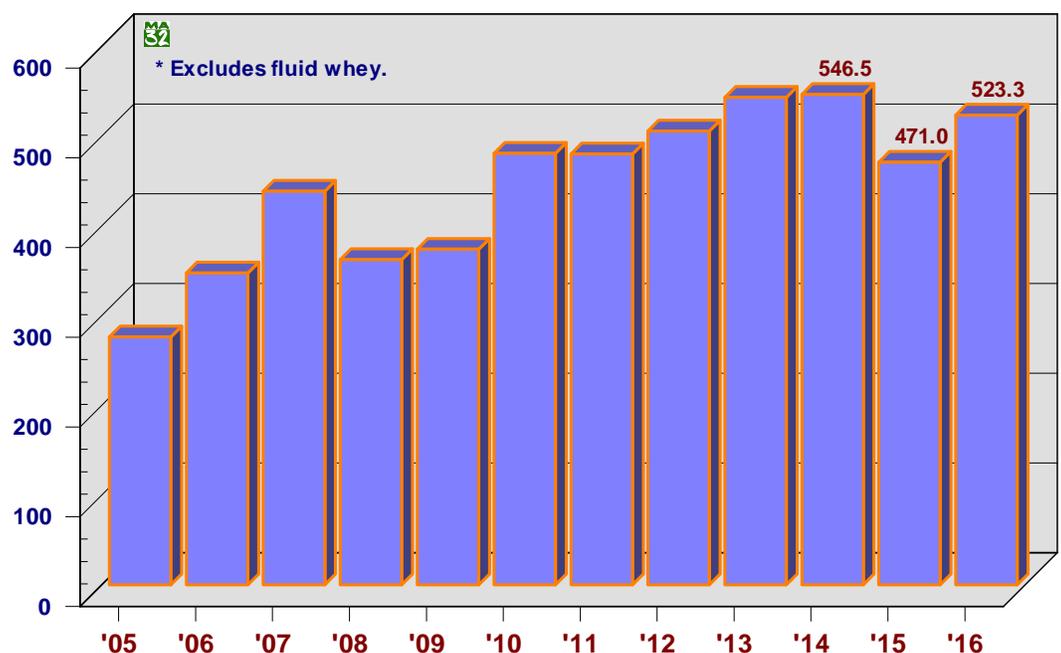
lactose and cheese both decreased marginally. Approximately 44% of dry whey production was exported during 2016, which was up from 40% in 2015. Exports of cheese as a proportion of total production were down 0.8 percentage points in 2016 to 5.2%, and down nearly 2 percentage points compared with the all-time record high posted for 2014. Butterfat exports were 2.8% of total 2016 production, which was up slightly from 2.6% in 2015, but down substantially from 8.6% in 2014 and 10.7% in 2013.

The remaining graphs on pages 3 through 5 of this bulletin depict 2005 through 2016 export volumes for various dairy products. Volumes represented are in thousand metric tons, with the largest yearly export total during this time period noted in each graph, along with the totals for the most recent three years.

Whey exports, which nearly doubled in volume between 2005 and 2014, are depicted in the bottom graph on this page. Annual exports of dry whey surpassed 475 thousand metric tons during the 5-year time frame from 2010 through 2014, and the 2014 volume of 546.5 thousand metric tons was the highest total on record. Exports declined by nearly 14% during 2015, before rebounding more than 11% last year. Whey exports ranked second among all dairy products by volume during 2016, and were fifth in terms of monetary value.

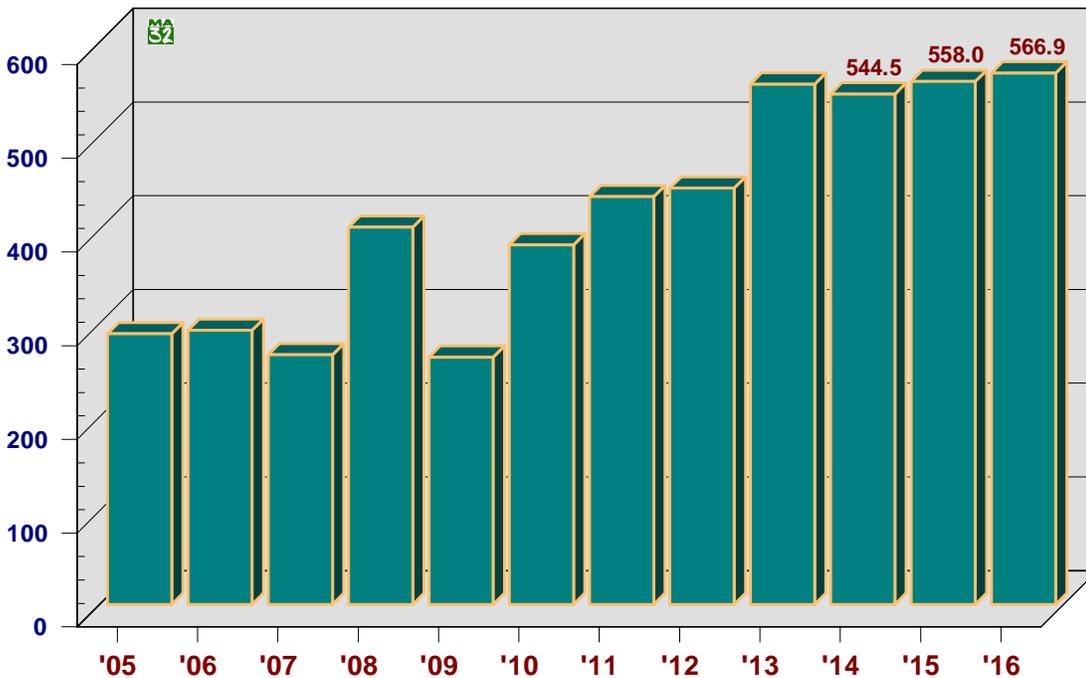
Whey Export Volume*

(Thousand Metric Tons)



Nonfat Dry Milk Export Volume

(Thousand Metric Tons)



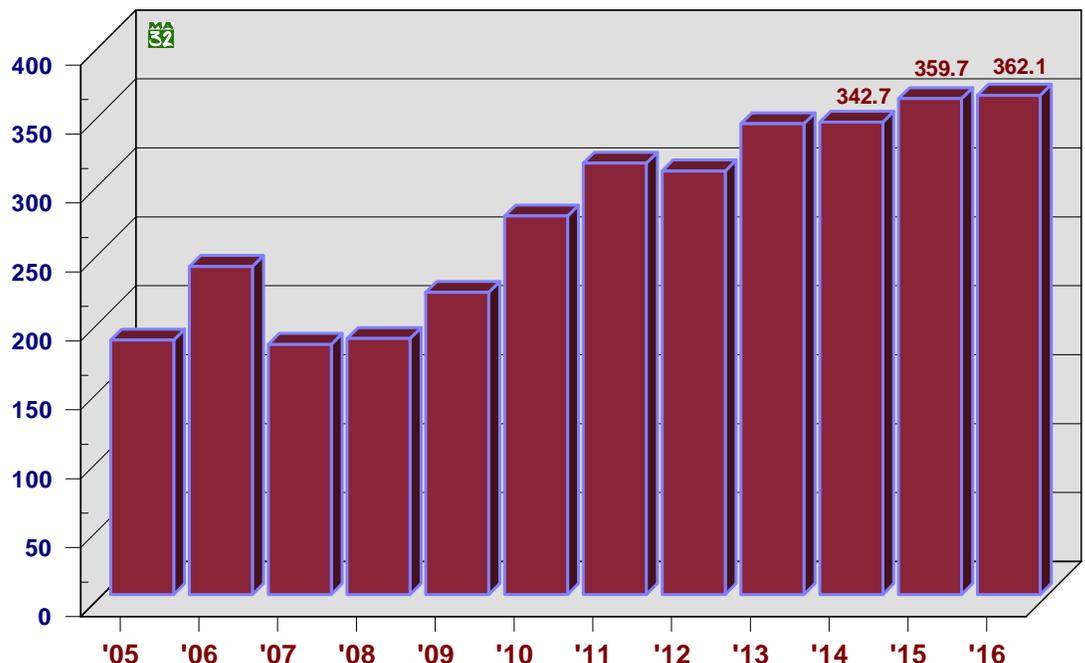
Nonfat Dry Milk exports, represented by the top graph on this page, posted an all-time high in 2016 with 566.9 thousand metric tons sold. This volume was 1.6% greater than the 2015 total, which was the previous record high. The 2016 total surpassed 2015 by 8.9 thousand metric tons. The volume exported in 2016 was more than double (+114.9%) the amount recorded during 2009 when 263.8 thousand metric tons were exported. Nonfat dry milk export volumes

were the largest among all dairy products in 2016, 2015 and 2013, while finishing a close second in 2014. In terms of the monetary value, nonfat dry milk was first among all dairy products exported for numerous years prior to 2015, before finishing a close second to cheese the last two years.

Lactose export volumes for the last 12 years are displayed in the bottom graph on this page. During 2016, lactose exports ranked third in volume among all dairy products with 362.1 thousand metric tons, and also ranked third in terms of monetary value, with sales of \$285.5 million. Exports accounted for approximately 73% of the total amount of lactose produced in the U.S. in 2016, down slightly from 75% the previous year but up from 65% in 2014. The volume of lactose exports represents the peak level during the period of time depicted by this graph. Lactose exports in 2016 were nearly double (+96.2%) the amount recorded in 2005 and, with the exception of 2012, have increased in volume each year since 2007.

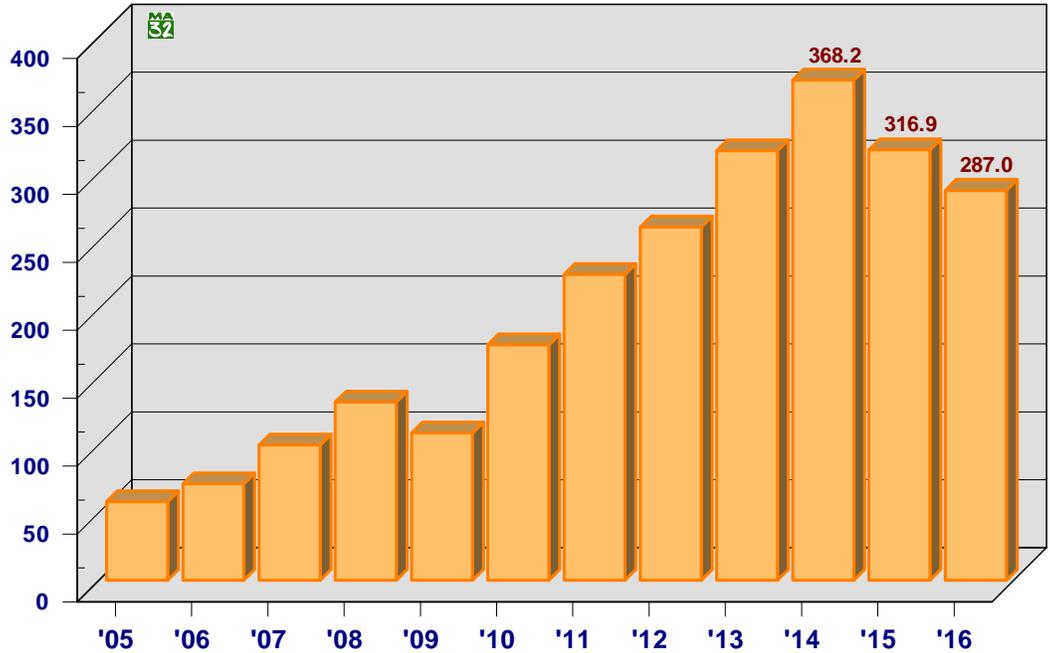
Lactose Export Volume

(Thousand Metric Tons)



Cheese Export Volume

(Thousand Metric Tons)



Cheese exports rose dramatically over a ten-year period, increasing from less than 58 thousand metric tons in 2005 to an all-time high of 368.2 thousand in 2014. The change over that time span represents an increase of approximately 535%, and year-over-year export volumes during this period registered increases every year except 2009. Sales decreased in 2015 and 2016, however, dropping by a little over 22% to 287.0 thousand metric tons. The drop in cheese sales the last two years were the first declines since 2009, and only the second and third year-over-year decreases since 2005.

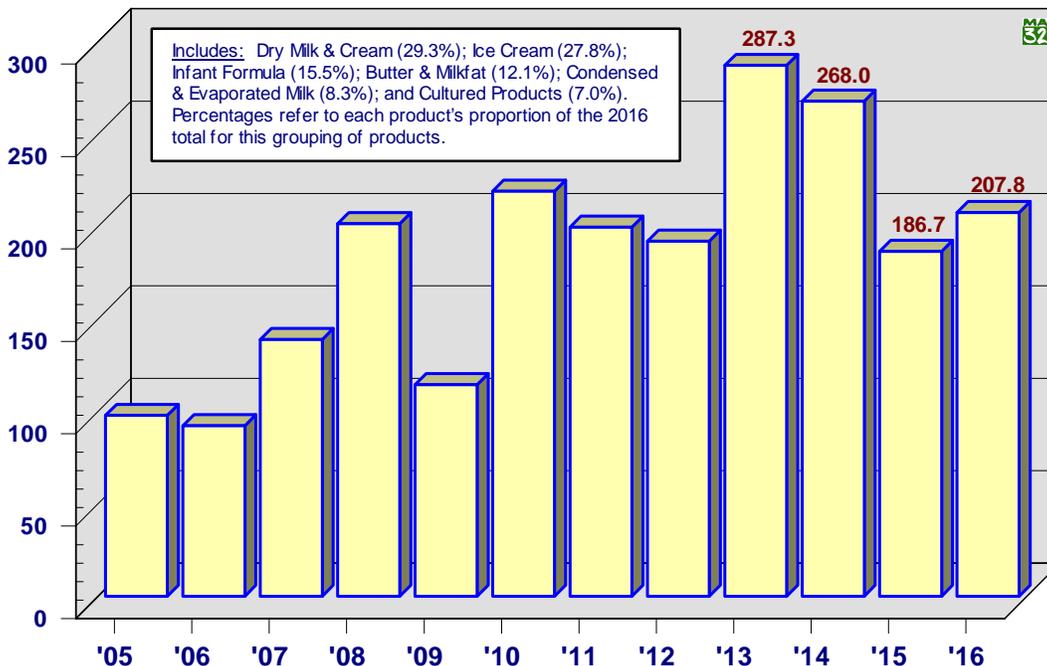
Even with the recent sales decreases, 2016 cheese exports increased by 165% in volume compared with 2009. Annual cheese export volume data from 2005 through 2016 is depicted in the top graph on this page.

Although, cheese exports ranked fourth in volume during 2016, they ranked first in terms of monetary value with sales of \$1.198 billion. This was down by nearly 30% compared with 2015's record dollar value, but is the third highest ever recorded. Export volumes accounted for 5.2% of all U.S. cheese production in 2016 – down from 6.0% compared with 2015, and also below 2014 when exports accounted for a record 7.1 % of total production.

The bottom graph on this page depicts the combined annual export sales volume since 2005 for a selected group of dairy products. The products included in this grouping are detailed within the graph, as are the 2016

Selected Other Products* Export Volume

(Thousand Metric Tons)



proportions of the total for each product.

Overall, the export volumes for these combined products increased substantially during the time frame depicted by this graph, peaking at 287.3 thousand metric tons in 2013. Although the year-over-year combined sales volume for these categories increased by over 11% in 2016, they decreased by nearly 27% comparing 2016 with the 2013 peak.



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	Statistical Uniform Price		Producer Price Differential		Class I Utilization	
	<u>Apr '17</u>	<u>Mar '17</u>	<u>Apr '17</u>	<u>Mar '17</u>	<u>Apr '17</u>	<u>Mar '17</u>
Northeast	16.39	17.30	1.17	1.49	29.39	32.07
Appalachian	17.77	19.06	-----	-----	63.06	69.76
Florida	20.08	21.28	-----	-----	80.58	83.42
Southeast	17.97	19.15	-----	-----	59.57	65.24
UpperMidwest	15.37	16.05	0.15	0.24	8.36	9.94
Central	15.42	16.24	0.20	0.43	26.37	28.66
Mideast	15.61	16.43	0.39	0.62	27.25	30.50
Pacific Northwest	15.23	15.93	0.01	0.12	24.18	26.59
Southwest	16.32	17.00	1.10	1.19	28.30	29.32
Arizona	15.35	16.02	-----	-----	22.99	24.33

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