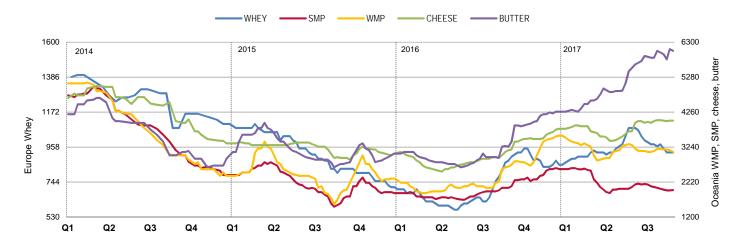
August 30, 2017



(\$/MT)



*Indicative prices. Milk powder, cheese and butterfat are Oceania; whey is western Europe

Source: USDEC and commercial sources.

Surplus will build as production comes on

By Alan Levitt and Marc Beck

When traders returned to their desks following their summer holiday, they found the global dairy market with the same split personality it's had since February. Butterfat is scarce and making new price highs each week. Skim milk powder (SMP) is abundant and prices have fallen to EU intervention levels.

The butter price is double what it was a year ago; the EU spot butter price is closing in on \$8000/ton (\$3.63/lb.), while buyers of Oceania butter are paying more than \$6000/ton (\$2.72/lb.). Butterfat production remains

AUGUST INDICATIVE PRICES - USDEC sources \$/MT, FOB SHIP (with change from July)

| | EUROPE | OCEANIA |
|----------|-------------|-------------|
| SMP | 2035 (-9) | 1993 (-101) |
| WMP | 3650 (+238) | 3158 (+29) |
| Cheddar | 4238 (+100) | 4013 (+25) |
| Butter | 7710 (+685) | 5980 (+74) |
| Dry whey | 940 (-35) | |
| WPC-34% | 2100 (NC) | |
| Lactose | 975 (-75) | |
| | | |

Source: USDEC.

constrained in all the major producing regions, and affordable, tradable inventories to meet import demand are non-existent.

We believe butterfat prices are at or near their peak, but will find support here for the rest of the year. Look for prices to weaken in early 2018 as supply builds in the months ahead. Futures in Europe and New Zealand show prices pulling back \$500-\$600/ton in Q1. Coming off these lofty levels, we think the drop could be a bit steeper.

Protein, on the other hand, has a very faint pulse. The global SMP price has sat at the EU intervention price (\$1800-\$2025/ton, depending on exchange rate) since March. Low prices helped move significant volumes of powder in May and June, including greater use in fat-filled milk powder, but EU SMP production has picked up and, of course, massive inventories remain in Europe (357,000 tons in intervention) and the United States (135,000 tons in commercial storage).

The European Commission offered to sell SMP out of intervention this summer but bids were too low. A plan is in the works to liquidate some of the powder under the "most deprived persons" program but details haven't been finalized or released. Intervention closes Sept 30, and after that processors won't be able to sell into public warehouses and there will be no effective "support price." Almost all of the powder in stock is now at least a year old; some is close to two years old. It could take several years to dispose of this stockpile. In the meantime, its presence keeps a lid on SMP prices.

Continued on p. 2

From p. 1

Adding to the supply pressure, much more milk powder is available from Canada. SMP exports in the first half of the year were 30,883 tons, compared with just 6,481 tons last year. Canada is providing low-ball prices as well, averaging just \$1870/ton on its exports during H1, \$200 to \$500 less than product exported from the United States, Europe or New Zealand.

The weak SMP market is a drag on the whey market. Dry whey prices are down about \$150/ton in the last three months.

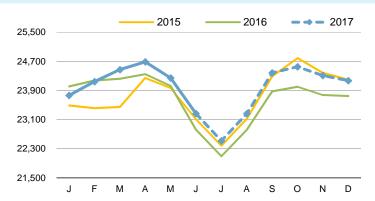
On the surface, the trade data would indicate very strong SMP demand in the March-June period – exports from the top 5 suppliers were up a whopping 25% during the four-month stretch, including a 61% increase (+115,000 tons) from the EU. But that's misleading because last year European suppliers spurned export sales and instead diverted more than 240,000 tons of SMP into public and private storage during the March-June period.

Cheese trade, on the other hand, has been legitimately robust. In the March-June period, exports from the top 5 were up 10% from a year ago. China (+37%), South Korea (+29%), Mexico (+25%), Southeast Asia (+16%) and Japan (+8%) all purchased significantly more than last year. The main beneficiary was the United States, which boosted exports 32% over the four months.

More broadly, the trade continues to look to China for market direction. After a slow start in 2017, China imports improved in June and July – up 29% year-over-year on a milk-equivalent basis. This has provided bullishness to the market. New Zealand export numbers suggest China imports were probably strong in August as well.

China milk production is down for the second straight year due to low margins and a hot summer. Milk powder

TOTAL MILK PRODUCTION FROM MAJOR EXPORTERS (000 MT)



Includes EU-28, U.S., New Zealand, Australia and Argentina. EU and Argentina are milk deliveries. 30-day months. July-December 2017 is USDEC forecast.

Source: USDA, EuroStat, DairyAustralia, DCANZ, Argentina Ministry of Agriculture.

inventories are satisfactory, but trending lower. Some analysts are projecting China imports to be up 30% in H2, but we think that's optimistic. They'll surely need to continue to buy heavily, but the summer imports likely reflected some forward buying and pipeline refilling, which could cut into import demand in the months ahead.

The positive numbers in the trade data from China, Mexico and others are offset by a third straight year of declining imports from the Middle East/North Africa (MENA) region. Demand has been very weak in 2017 – import volumes were down 18% in the first five months of the year, despite good early tenders from Algeria. That's a drop-off of about 32,000 product-tons per month. Sales into Saudi Arabia, UAE and Oman were all significantly lower. Lackluster oil prices would appear to be limiting purchasing power in the region.

Suppliers also are still dealing with lost demand from Venezuela, which was buying 15,000 tons of WMP per month a few years ago.

Continued on p. 3

ABOUT THIS ISSUE

Global Dairy Market Outlook is written and distributed by the U.S. Dairy Export Council (USDEC), 2107 Wilson Blvd., Suite 600, Arlington, VA 22201, USA, (703) 528-3049, FAX (703) 528-3705, website www.usdec.org. Data is compiled and analyzed by Alan Levitt, vice president of communications and market analysis, and Marc Beck, executive vice president of strategy and insights. Analysis is supported by USDEC's network of 10 international offices.

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This issue of Global Dairy Market Outlook covers conditions in late August 2017. For up-to-date market data and commentary, visit the USDEC website at www.usdec.org/research-and-data/market-data.

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The U.S. Dairy Export Council, primarily funded by Dairy Management Inc. through the producer checkoff, works closely with its member processors, trading companies and others to build global demand for U.S. dairy products.

From p. 2

This year they've bought almost nothing, leaving suppliers in New Zealand and South America with a substantial amount of lost demand to re-allocate.

In all, trade activity was up in H1-17 compared with last year's muted levels, but volumes are about the same as 2014 and 2015.

Meanwhile, milk supplies are sufficient to meet global demand, even more so considering the heavy inventory buildup in Europe and the United States. Output from the top 5 suppliers was down in the first two months of the year, but up 1.3% in the March-June period.

In the European Union, milk deliveries were up 1.8% in June, and we project an increase of 2% in the second half of the year. In part this is due to weak comparables in 2016. Still, slaughter rates across the EU have slowed and milk prices from some processors are up more than 50% from this time last year. Germany, France and the Netherlands are treading water, but Ireland and Poland are posting strong growth.

The New Zealand flush is shaping up positively: slaughter numbers are down, imports of feed supplements are up, pastures were in good shape until recent heavy rains, and payouts are very good, with Fonterra projecting NZ\$6.75/kg MS. As a result, farmer confidence is much improved.

We project New Zealand milk production growth of +3% in H2. Each 1% of NZ milk production equals about 25,000 to 30,000 tons of WMP. So 3% growth means approximately 85,000 tons more product to sell vs. H2 last year.

U.S. production continues to grow steadily. Cow numbers are

up 74,000 head (+0.8%) vs. a year ago. Margins aren't great, but they're good enough to forestall culling. Milk output was up 2.0% in the first half (adjusted for leap day), and we project 1.8% expansion in H2.

Australia milk production has returned to modest growth after posting the lowest volume in 20 years in 2016/17. And production in key South American countries is improved this year as well after a very poor year in 2016. Argentina, Uruguay and Brazil all are trending above last year.

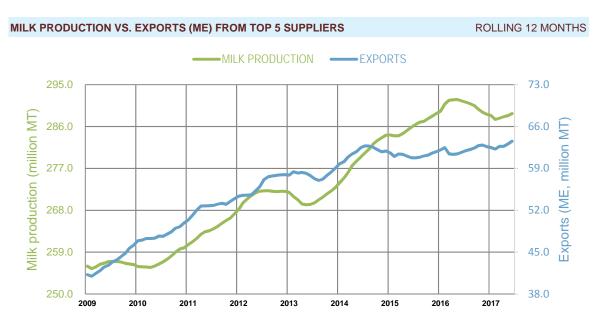
Combined, we forecast milk production from the five major suppliers to run about 2% higher in H2. By our calculations, that will generate about 230,000 product tons of incremental export supply over the last six months of the year, above and beyond what was exported last year.

On the other side of the ledger, we project combined import demand from the major import regions – China, MENA, Southeast Asia, Mexico, Japan and South Korea – to grow 4% in H2, an increase of approximately 120,000 product tons required vs. last year. By falling short of exportable supply, about 110,000 tons of product will be left to go into other markets or into inventory.

That calculus assumes China imports are +20% in H2. Even if China imports are up 30% as some project, it will only cut this gap in half and still leaves some excess.

Therefore, we think there's a greater bias for prices declining than rising in the months ahead.

Of course, the character of the market in the months ahead will depend in large part on the strength of the New Zealand flush and the resilience of China buying. Our view is that global supply will become increasingly ample (except for butterfat) and that prices will ease as the Southern Hemisphere flush comes on.



Exports from the Top 5 suppliers (shown here as a indicator of global trade) have improved in recent months. Milk production contracted in the second half of 2016, but has begun to expand again.

Exports include SMP, WMP, cheese, butterfat and whey. Source: USDEC, Global Trade Atlas, USDA and other government agencies.

World Dairy Exports

| SMP EXPORTS | | | | | | | | | |
|--------------|-------------|---------|------------------|-------|--------------|-----------|---------|-----------------|------------|
| LA | ATEST MONTH | Jl | JNE (VOLUME, MT) | | YEAR-TO-DATE | | | JANUARY-JUNE (V | OLUME, MT) |
| | 2015 | 2016 | 2017 | % CHG | | 2015 | 2016 | 2017 | % CHG |
| EU-28 | 54,356 | 41,406 | 81,154 | +96 | EU-28 | 364,420 | 310,599 | 419,906 | +35 |
| U.S.* | 46,703 | 42,775 | 45,777 | +7 | U.S.* | 288,915 | 258,218 | 309,175 | +20 |
| NZ | 19,897 | 33,702 | 34,639 | +3 | NZ | 200,975 | 217,343 | 188,589 | -13 |
| Australia | 21,596 | 9,345 | 16,953 | +81 | Australia | 105,780 | 87,357 | 78,637 | -10 |
| Argentina | 1,429 | 2,001 | 750 | -63 | Argentina | 12,489 | 12,562 | 6,145 | -51 |
| TOTAL OF 5 | 143,981 | 129,229 | 179,273 | +39 | TOTAL OF 5 | 972,579 | 886,079 | 1,002,452 | +13 |
| WMP EXPORTS | 8 | | | | | | | | |
| LA | ATEST MONTH | Jl | JNE (VOLUME, MT) | | YEAR-TO-DATE | | | JANUARY-JUNE (V | OLUME, MT) |
| | 2015 | 2016 | 2017 | % CHG | | 2015 | 2016 | 2017 | % CHG |
| NZ | 91,355 | 105,660 | 126,046 | +19 | NZ | 700,948 | 677,633 | 687,834 | +2 |
| EU-28 | 36,633 | 37,221 | 36,277 | -3 | EU-28 | 207,906 | 206,520 | 209,398 | +1 |
| Argentina | 10,028 | 6,356 | 4,267 | -33 | Argentina | 62,990 | 56,831 | 28,008 | -51 |
| Australia | 7,274 | 4,285 | 5,362 | +25 | Australia | 36,359 | 33,154 | 28,703 | -13 |
| U.S.* | 2,856 | 2,421 | 1,169 | -52 | U.S.* | 21,262 | 13,994 | 10,715 | -23 |
| TOTAL OF 5 | 148,146 | 155,943 | 173,121 | +11 | TOTAL OF 5 | 1,029,465 | 988,132 | 964,658 | -2 |
| CHEESE EXPO | RTS | | | | | | | | |
| LA | ATEST MONTH | Jl | JNE (VOLUME, MT) | | YEAR-TO-DATE | | | JANUARY-JUNE (V | OLUME, MT) |
| | 2015 | 2016 | 2017 | % CHG | | 2015 | 2016 | 2017 | % CHG |
| EU-28 | 62,172 | 69,423 | 73,840 | +6 | EU-28 | 343,036 | 391,904 | 421,515 | +8 |
| NZ | 20,997 | 28,279 | 29,574 | +5 | NZ | 165,154 | 180,535 | 177,588 | -2 |
| U.S. | 26,112 | 23,056 | 30,542 | +32 | U.S. | 175,490 | 139,960 | 172,990 | +24 |
| Australia | 17,467 | 18,680 | 13,637 | -27 | Australia | 85,396 | 86,508 | 86,529 | +0 |
| Argentina | 3,694 | 3,589 | 3,432 | -4 | Argentina | 18,911 | 22,266 | 20,483 | -8 |
| TOTAL OF 5 | 130,442 | 143,027 | 151,025 | +6 | TOTAL OF 5 | 787,987 | 821,173 | 879,105 | +7 |
| BUTTERFAT EX | XPORTS | | | | | | | | |
| LA | ATEST MONTH | Jl | JNE (VOLUME, MT) | | YEAR-TO-DATE | | | JANUARY-JUNE (V | OLUME, MT) |
| | 2015 | 2016 | 2017 | % CHG | | 2015 | 2016 | 2017 | % CHG |
| NZ | 29,949 | 37,493 | 36,411 | -3 | NZ | 237,063 | 244,472 | 219,661 | -10 |
| EU-28 | 13,335 | 17,860 | 16,205 | -9 | EU-28 | 84,073 | 118,358 | 95,563 | -19 |
| U.S. | 1,470 | 989 | 3,504 | +254 | U.S. | 12,851 | 12,710 | 11,975 | -6 |
| Australia | 5,425 | 4,845 | 1,904 | -61 | Australia | 19,893 | 17,231 | 8,110 | -53 |
| Argentina | 326 | 303 | 204 | -33 | Argentina | 4,653 | 2,898 | 1,668 | -42 |
| TOTAL OF 5 | 50,505 | 61,490 | 58,228 | -5 | TOTAL OF 5 | 358,533 | 395,669 | 336,977 | -15 |

^{*} USDA data for U.S. 2016-17 for NDM/SMP and WMP adjusted to reflect shipments to Mexico misclassified as WMP.

Source: Global Trade Atlas and USDA.

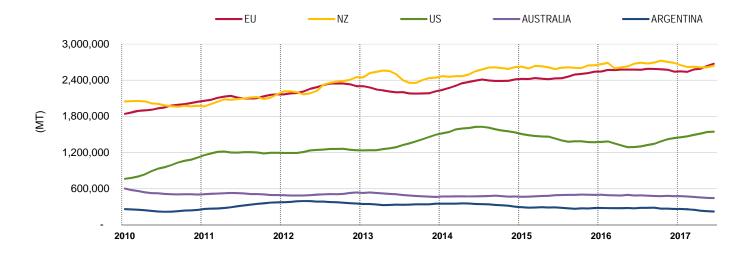
World Dairy Exports

| WHEY PRODU | CTS EXPORTS | ; | | | | | | | |
|-------------|-------------|---------|----------------|-------|--------------|---------|---------|-----------------|------------|
| L | ATEST MONTH | JU | JNE (VOLUME, M | Γ) | YEAR-TO-DATE | | | JANUARY-JUNE (V | OLUME, MT) |
| | 2015 | 2016 | 2017 | % CHG | | 2015 | 2016 | 2017 | % CHG |
| EU-28 | 53,002 | 55,840 | 51,395 | -8 | EU-28 | 283,954 | 292,778 | 305,289 | +4 |
| U.S. | 38,012 | 47,695 | 43,057 | -10 | U.S. | 236,876 | 231,903 | 259,757 | +12 |
| Switzerland | 7,946 | 6,843 | 7,447 | +9 | Switzerland | 47,719 | 44,262 | 39,149 | -12 |
| Argentina | 5,642 | 5,219 | 4,489 | -14 | Argentina | 30,771 | 32,676 | 25,145 | -23 |
| NZ | 1,572 | 4,183 | 5,157 | +23 | NZ | 13,428 | 23,807 | 23,023 | -3 |
| Australia | 4,826 | 7,227 | 3,635 | -50 | Australia | 19,004 | 30,009 | 20,165 | -33 |
| TOTAL OF 6 | 111,000 | 127,007 | 115,180 | -9 | TOTAL OF 6 | 631,752 | 655,435 | 672,528 | +3 |

| LACTOSE EXP | PORTS | | | | | | | | |
|-------------|-------------|--------|---------------|-------|--------------|---------|---------|-----------------|------------|
| L | ATEST MONTH | JU | NE (VOLUME, M | Γ) | YEAR-TO-DATE | | , | JANUARY-JUNE (V | OLUME, MT) |
| | 2015 | 2016 | 2017 | % CHG | | 2015 | 2016 | 2017 | % CHG |
| U.S. | 33,133 | 30,835 | 30,079 | -2 | U.S. | 176,286 | 175,266 | 173,133 | -1 |
| EU-28 | 15,173 | 13,341 | 16,852 | +26 | EU-28 | 87,701 | 81,328 | 108,374 | +33 |
| NZ | 2,722 | 2,226 | 1,835 | -18 | NZ | 10,145 | 11,336 | 11,777 | +4 |
| TOTAL OF 3 | 51,028 | 46,402 | 48,766 | +5 | TOTAL OF 3 | 274,132 | 267,930 | 293,284 | +9 |

AGGREGATE EXPORT VOLUME - MAJOR SUPPLIERS - ROLLING 12 MONTHS

SMP, WMP, CHEESE, BUTTERFAT, WHEY



Source: Global Trade Atlas and USDA.

ACCESS TRADE DATA ONLINE

Visit usdec.org/research-and-data/market-data/trade-flows

World Dairy Imports

| SMP IMPORTS | | | | | | | | (\ | /OLUME, MT) |
|-------------|------------|---------|-----------|-------|-------------|-----------|---------|-----------|-------------|
| LA | TEST MONTH | Prev Yr | Latest Mo | % CHG | YEA | R-TO-DATE | Prev Yr | Latest Yr | % CHG |
| Mexico | May 17 | 21,009 | 33,929 | +61 | Mexico | May | 107,646 | 133,598 | +24 |
| China | Jul 17 | 13,067 | 26,255 | +101 | China | Jul | 126,944 | 158,554 | +25 |
| Philippines | May 17 | 17,723 | 12,694 | -28 | Philippines | May | 79,078 | 63,736 | -19 |
| Indonesia | Apr 17 | 12,668 | 8,148 | -36 | Indonesia | Apr | 49,896 | 53,054 | +6 |
| Algeria | Apr 17 | 7,027 | 10,797 | +54 | Algeria | Apr | 34,639 | 52,493 | +52 |
| Malaysia | May 17 | 11,245 | 10,995 | -2 | Malaysia | May | 54,636 | 52,439 | -4 |

| WMP IMPORTS | | | | | | | | (\ | /OLUME, MT) |
|-------------|-----------|---------|-----------|-------|-----------|-----------|---------|-----------|-------------|
| LAT | EST MONTH | Prev Yr | Latest Mo | % CHG | YEA | R-TO-DATE | Prev Yr | Latest Yr | % CHG |
| China | Jul 17 | 24,777 | 40,857 | +65 | China | Jul | 318,737 | 337,496 | +6 |
| Algeria | Apr 17 | 13,172 | 24,513 | +86 | Algeria | Apr | 64,785 | 111,442 | +72 |
| Brazil | Jul 17 | 13,482 | 6,571 | -51 | Brazil | Jul | 70,826 | 56,647 | -20 |
| Sri Lanka | Jul 17 | 6,843 | 5,011 | -27 | Sri Lanka | Jul | 46,811 | 48,068 | +3 |
| Singapore | Jun 17 | 6,437 | 5,483 | -15 | Singapore | Jun | 34,461 | 37,141 | +8 |
| Hong Kong | Jul 17 | 7,972 | 6,874 | -14 | Hong Kong | Jul | 49,312 | 43,441 | -12 |

| CHEESE IMPOR | RTS | | | | | | | (\ | OLUME, MT) |
|--------------|-----------|---------|-----------|-------|-----------|-----------|---------|-----------|------------|
| LAT | EST MONTH | Prev Yr | Latest Mo | % CHG | YEA | R-TO-DATE | Prev Yr | Latest Yr | % CHG |
| Japan | Jun 17 | 19,492 | 24,651 | +26 | Japan | Jun | 126,414 | 134,497 | +6 |
| U.S. | Jun 17 | 15,332 | 14,896 | -3 | U.S. | Jun | 99,555 | 87,662 | -12 |
| So. Korea | Jul 17 | 10,822 | 10,538 | -3 | So. Korea | Jul | 63,900 | 77,046 | +21 |
| Mexico | May 17 | 10,750 | 12,360 | +15 | Mexico | May | 53,190 | 53,456 | +1 |
| China | Jul 17 | 10,233 | 8,750 | -14 | China | Jul | 55,801 | 67,394 | +21 |
| Russia | Jun 17 | 1,935 | 3,394 | +75 | Russia | Jun | 13,773 | 16,444 | +19 |

| BUTTERFAT IM | IPORTS | | | | | | | (\ | OLUME, MT) |
|--------------|------------|---------|-----------|-------|---------|-----------|---------|-----------|------------|
| LA | TEST MONTH | Prev Yr | Latest Mo | % CHG | YEA | R-TO-DATE | Prev Yr | Latest Yr | % CHG |
| China | Jul 17 | 8,004 | 8,589 | +7 | China | Jul | 52,178 | 55,781 | +7 |
| Egypt | Feb 17 | 6,112 | 2,652 | -57 | Egypt | Feb | 7,881 | 5,209 | -34 |
| Mexico | May 17 | 3,025 | 3,991 | +32 | Mexico | May | 20,578 | 23,185 | +13 |
| Russia | Jun 17 | 1,057 | 3,079 | +191 | Russia | Jun | 8,376 | 19,981 | +139 |
| Iran | Jun 17 | 5,022 | 3,629 | -28 | Iran | Jun | 17,601 | 17,973 | +2 |
| Morocco | Jun 17 | 2,045 | 1,015 | -50 | Morocco | Jun | 13,888 | 9,433 | -32 |

World Dairy Imports

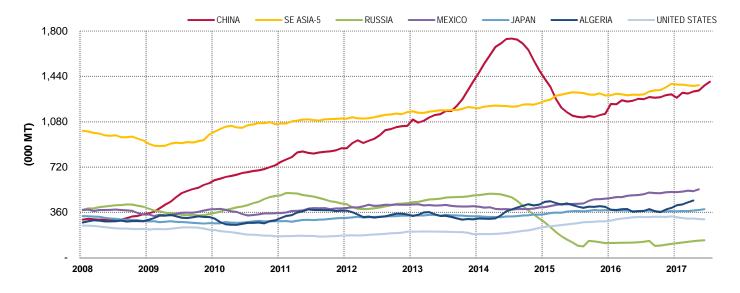
| WHEY PRODUC | CTS IMPORTS | | | | | | | (\ | /OLUME, MT) |
|-------------|-------------|---------|-----------|-------|-----------|-----------|---------|-----------|-------------|
| LA | TEST MONTH | Prev Yr | Latest Mo | % CHG | YEA | R-TO-DATE | Prev Yr | Latest Yr | % CHG |
| China | Jul 17 | 47,543 | 49,141 | +3 | China | Jul | 287,548 | 322,090 | +12 |
| Indonesia | Apr 17 | 7,688 | 10,672 | +39 | Indonesia | Apr | 35,734 | 38,877 | +9 |
| Japan | Jun 17 | 5,870 | 6,170 | +5 | Japan | Jun | 32,227 | 35,622 | +11 |
| Thailand | Jul 17 | 6,514 | 5,170 | -21 | Thailand | Jul | 36,774 | 37,018 | +1 |
| Malaysia | May 17 | 7,153 | 5,252 | -27 | Malaysia | May | 30,951 | 24,647 | -20 |
| Mexico | May 17 | 4,307 | 3,758 | -13 | Mexico | May | 18,618 | 18,672 | +0 |

| LACTOSE IMP | PORTS | | | |
|-------------|-------------|---------|-----------|-------|
| L | ATEST MONTH | Prev Yr | Latest Mo | % CHG |
| China | Jul 17 | 6,914 | 6,547 | -5 |
| NZ | Jun 17 | 5,480 | 7,354 | +34 |
| Japan | Jun 17 | 6,472 | 6,684 | +3 |

| | | | | (VOLUME, MT) |
|-------|--------------|---------|-----------|--------------|
| | YEAR-TO-DATE | Prev Yr | Latest Yr | % CHG |
| China | Jul | 52,366 | 54,072 | +3 |
| NZ | Jun | 38,704 | 46,371 | +20 |
| Japan | Jun | 36,186 | 40,336 | +11 |

AGGREGATE IMPORT VOLUME - MAJOR BUYERS - ROLLING 12 MONTHS

SMP, WMP, CHEESE, BUTTERFAT, WHEY



SE Asia-5 includes Indonesia, Malaysia, Philippines, Singapore and Thailand. Russia excludes imports from Belarus.

Source: Global Trade Atlas and USDA.

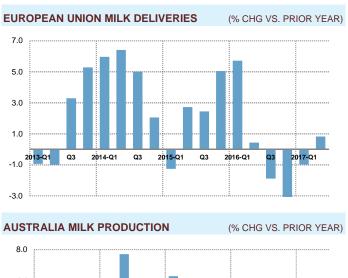
ACCESS TRADE DATA ONLINE

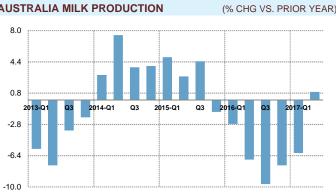
Visit usdec.org/research-and-data/market-data/trade-flows

Global Milk Production

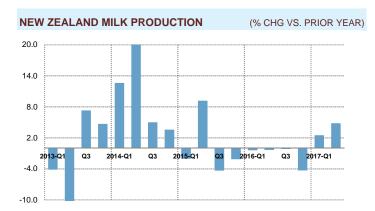
MILK PRODUCTION - CHANGE FROM PRIOR YEAR (000 MT) ■ EU-28 US ■ NZ ■ AUSTRALIA ARGENTINA 1,600 2013 2014 2015 2017 2016 1,200 800 400 (400) (800)(1,200)

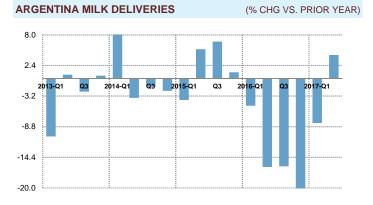
* Feb 2012 and 2016 adjusted for leap day.









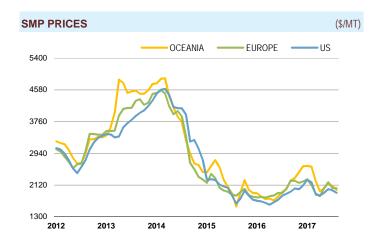


Q1-2012 and Q1-2016 adjusted for leap day.

Latest month may include USDEC estimates.

Source: USDA, EuroStat, DairyAustralia, DCANZ, Argentina Ministry of Agriculture.

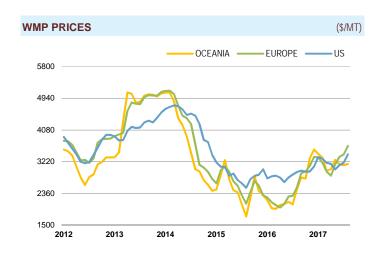
World Prices

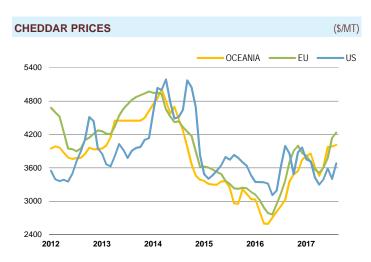


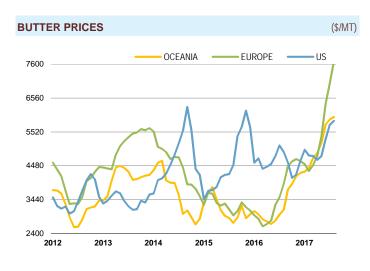
| Prices vs. a year ago | | | | | | | | |
|-----------------------|---------|--------|------|--|--|--|--|--|
| | Oceania | Europe | U.S. | | | | | |
| SMP | -1% | +0% | +1% | | | | | |
| WMP | +28% | +44% | +16% | | | | | |
| Cheddar | +33% | +26% | -8% | | | | | |
| Butter | +91% | +96% | +20% | | | | | |
| Whey | | +15% | +51% | | | | | |

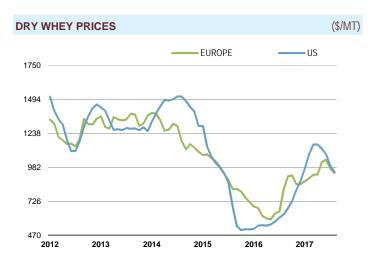
ACCESS PRICING DATA ONLINE

Visit usdec.org/research-and-data/market-data/prices







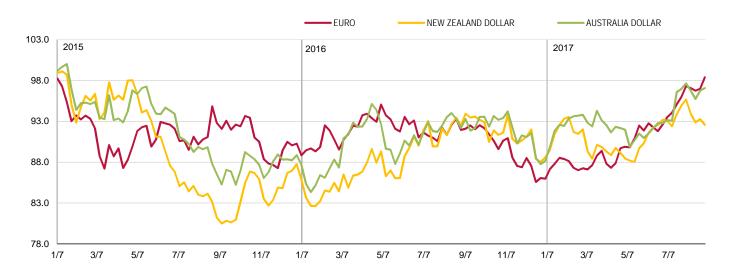


Source: USDEC and commercial sources.

Currency Exchange Rates

EXCHANGE RATES RELATIVE TO U.S. DOLLAR, EXPORTING COUNTRIES

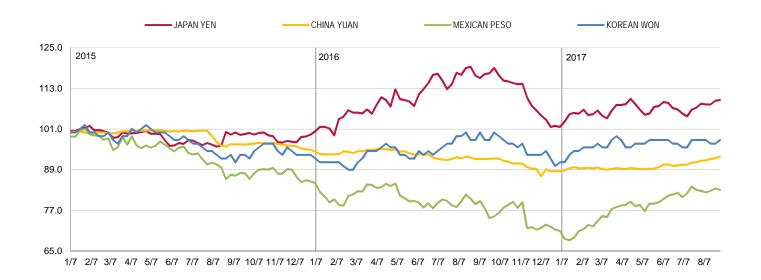
INDEXED TO JAN. 1, 2015



Top chart: If line is trending up, currency is strengthening vs. U.S. dollar (U.S. dollar is weakening). This is favorable for U.S. competitiveness. If line is trending down, currency is weakening vs. U.S. dollar (U.S. dollar is strengthening). This is unfavorable for U.S. competitiveness.

EXCHANGE RATES RELATIVE TO U.S. DOLLAR, IMPORTING COUNTRIES

INDEXED TO JAN. 1, 2015



Bottom chart: If line is trending up, currency is strengthening vs. U.S. dollar (U.S. dollar is weakening). This is favorable for exports, because it increases import purchasing power. If line is trending down, currency is weakening vs. U.S. dollar (U.S. dollar is strengthening). This is unfavorable for exports, because it decreases import purchasing power.

Source: Oanda.com.

U.S. Exports

Exports in first half reach three-year high

U.S. dairy exports in the first half of the year were the most in three years, led by record sales of nonfat dry milk/skim milk powder (NDM/SMP) and whey products, and a 24-percent year-over-year gain in cheese exports.

Suppliers shipped 950,291 tons of milk powder, cheese, butterfat, whey and lactose in the first six months of 2017, up 13 percent from last year, and the most since 2014. U.S. exports were valued at \$2.77 billion, up 23 percent. U.S. suppliers have capitalized on favorable pricing and exchange rates this year, and tapped into strong demand from Mexico and China.

Exports of **NDM/SMP** were 309,175 tons, up 20 percent from a year ago. Sales to Mexico were up 27 percent (+31,044 tons) and shipments to China were more than double (+10,107 tons). This offset declines in sales to Southeast Asia, Pakistan and the Middle East/North Africa (MENA) region.

Cheese exports in the first half reached 172,990 tons, up 24 percent. Shipments to South Korea were up 48 percent (+9,328 tons), while sales to Mexico (+16 percent, +7,237 tons), Australia (+68 percent, +5,004 tons) and Southeast Asia (+66 percent, +3,307 tons) ran at a record H1 pace.

Exports of **whey products** totaled 259,757 tons in the first half, 12 percent greater than last year. Sales of dry whey, modified whey and whey protein isolate (WPI) all posted double-digit gains.

Total whey exports to China were a record-high 122,596 tons, up 43 percent (+36,729 tons) vs. a year ago. Dry whey shipments to China more than doubled (+25,071 tons), while sales of modified whey were up 36 percent (+10,435 tons) and WPI exports were up 38 percent (+946 tons).

In contrast, whey exports to Southeast Asia were down 22 percent (-10,877 tons) in the first half, with drop-offs in shipments of dry whey, whey protein concentrate and modified whey. In addition, whey exports to South Korea fell 23 percent (-1,628 tons).

Butterfat exports in the first half were 11,975 tons, off 6 percent from last year and the lowest figure since 2009.

On a total milk solids basis, U.S. exports were equivalent to 14.3 percent of U.S. milk production in the first half of 2017. Imports were equivalent to 3.5 percent of production.

| | LATEST MONTH | 1 | JUNE (VOLUME, M | T) | | YEAR-TO-DATE | | JANUARY - JUNE (\ | VOLUME, MT) |
|----------------------------|--------------|----------|-----------------|-------|------------------------------|--------------|------------|-------------------|-------------|
| | 2015 | 2016 | 2017 | % CHG | | 2015 | | | % CHG |
| NDM/SMP* | 46,703 | 42,775 | 45,777 | +7 | NDM/SMP* | 288,915 | 258,218 | 309,175 | +20 |
| WMP* | 2,856 | 2,421 | 1,169 | -52 | WMP* | 21,262 | 13,994 | 10,715 | -23 |
| Cheese | 26,112 | 23,056 | 30,542 | +32 | Cheese | 175,490 | 139,960 | 172,990 | +24 |
| Butterfat | 1,470 | 989 | 3,504 | +254 | Butterfat | 12,851 | 12,710 | 11,975 | -6 |
| Total Whey | 38,012 | 47,695 | 43,057 | -10 | Total Whey | 236,876 | 231,903 | 259,757 | +12 |
| -Dry whey | 17,368 | 16,868 | 17,756 | +5 | -Dry whey | 100,691 | 83,906 | 99,987 | +19 |
| -WPC | 7,869 | 15,923 | 10,012 | -37 | -WPC | 47,510 | 67,858 | 66,999 | -1 |
| -Modified whe | 10,455 | 12,288 | 12,114 | -1 | -Modified whey | 66,158 | 64,055 | 74,856 | +17 |
| -WPI | 2,320 | 2,617 | 3,175 | +21 | -WPI | 22,517 | 16,084 | 17,915 | +11 |
| Lactose | 33,133 | 30,835 | 30,079 | -2 | Lactose | 176,286 | 175,266 | 173,133 | -1 |
| MPC | 2,106 | 1,689 | 2,074 | +23 | MPC | 17,211 | 11,117 | 12,545 | +13 |
| Aggregate volume** | 150,391 | 149,461 | 156,203 | +5 | Aggregate volume** | 928,893 | 843,168 | 950,291 | +13 |
| milk/cream (000 liters) | 10,811 | 7,018 | 9,124 | +30 | milk/cream (000 liters) | 55,049 | 49,319 | 52,624 | +7 |
| Total Value (millions) ** | \$ 457.1 | \$ 368.1 | \$ 463.8 | +26 | Total Value (millions) ** | \$ 2,934.3 | \$ 2,255.5 | \$ 2,765.1 | +23 |

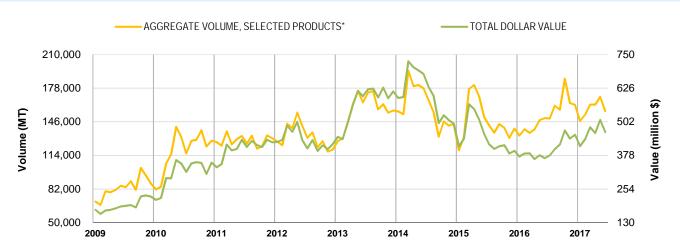
^{*} USDA data for NDM/SMP and WMP for June 2016-March 2017 adjusted to reflect shipments to Mexico misclassified as WMP.

Source: USDA, USDEC.

^{**} Aggregate volume includes the products listed above, except fluid milk. Total value includes other products in addition to the ones listed here.

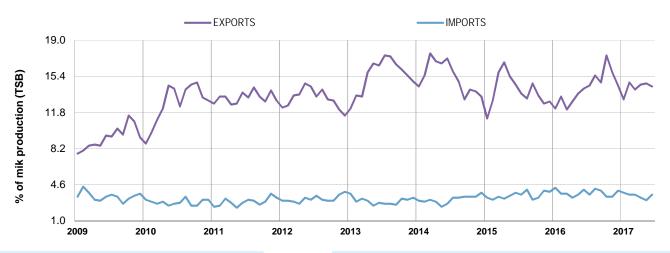
U.S. Exports

U.S. EXPORTS VOLUME AND VALUE



^{*} Volume includes SMP, WMP, MPC, whey, cheese, butterfat, lactose

U.S. EXPORTS AND IMPORTS AS A PERCENT OF MILK PRODUCTION



| II C F | A LIDVI EVIDANTO | TOP 10 MARKETS |
|--------|------------------|----------------|
| 11 > 1 | JAIRYFXPURIS | TOP ID MARKETS |

| (million \$) | Jı | une 17 | vs. yr ago | |
|--------------------------|----|--------|------------|--|
| Mexico | \$ | 109.1 | +32% | |
| Canada | | 62.0 | +17% | |
| Southeast Asia | | 54.3 | +12% | |
| China | | 48.3 | +60% | |
| So. Korea | | 32.1 | +111% | |
| Japan | | 27.6 | +51% | |
| South America | | 20.2 | +5% | |
| Oceania | | 16.9 | +10% | |
| Caribbean | | 16.6 | -2% | |
| Middle East/North Africa | | 16.0 | +19% | |

U.S. EXPORTS AS % OF PRODUCTION

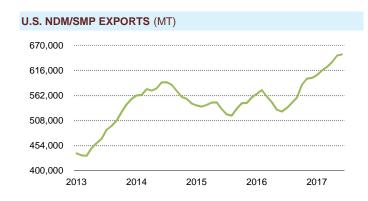
| | June | yr ago | Jan-Jun 17 | yr ago |
|-------------------|-------|--------|------------|--------|
| NDM/SMP | 50% | 46% | 55% | 47% |
| Total cheese | 6.5% | 5.1% | 6.2% | 5.1% |
| Butterfat | 5.5% | 1.5% | 2.7% | 2.8% |
| Dry sweet whey | 45% | 47% | 44% | 38% |
| Lactose | 69% | 73% | 68% | 71% |
| Total milk solids | 14.4% | 14.2% | 14.3% | 13.1% |

ACCESS U.S. EXPORT DATA ONLINE

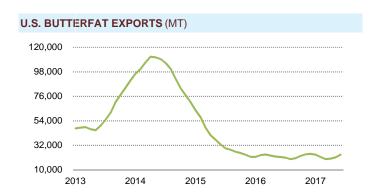
 $Visit\ usdec. org/research- and- data/market- data/us-export- data$

Source: USDA, USDEC, National Milk Producers Federation.

U.S. Exports: Rolling 12-Month Volume



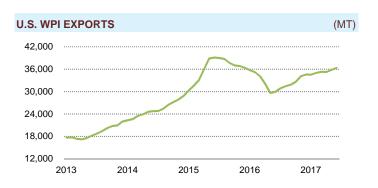














^{*} Total whey includes dry whey, WPC, modified whey products and WPI.

Source: USDA, USDEC.

U.S. Market Situation

In U.S. market, inventories are building

Resilient milk production, sluggish domestic use and rising inventory are putting downward pressure on the U.S. dairy market. Prices have declined in recent weeks.

On Aug. 29, the benchmark CME block price settled at \$3368/ton, down \$500 in two weeks. Production is heavy. In the first half of the year, U.S. cheese production was up 3.3% from the prior year (all figures adjusted for leap day). Meanwhile, domestic use was up fractionally. As a result, cheese inventories at the end of July were a record-high 624,000 tons, up 8% (+45,000 tons) vs. a year ago.

Butter closed at \$5633 on Aug. 29, the second-highest ever for that date, but down \$400 from the early-August peak, and the lowest since mid-June. Butter inventories (140,000 tons) are high by historical standards, but manufacturers are holding stocks with confidence in the hope for strong seasonal demand. Domestic commercial butter use was flat in Q2 as suppliers faced some price resistance. Despite stronger milk production, butter churning was down 4% in the April-June period.

Fluid milk consumption was down 1.7% in H1, the eighth straight year of decline, making more milk available for manufacturing.

Meanwhile, dairy farm margins are still good enough to support milk production growth. In the first seven months of the year, milk production was up 2.0%. Cow numbers totalled 9.40 million in July, 74,000 head more than last year. Feed costs remain historically low.

USDA expects expansion to continue; the ag department projects U.S. milk production to increase 1.6% in H2, and another 2.1% in 2018.

The NDM/SMP market is steady, with prices ranging between \$1860 and \$1975/ton. Production in the first half was up 2.9% year-over-year and inventory has accumulated, despite record export volumes. On June 30, stocks were a record high 135,000 tons, up 38% (+37,000 tons) since last November.

The whey market continues to drift lower. Dry whey production in the first half was the most in five years, up 4.2% from last year – a function of growing cheese production. Inventories are plentiful and buyers are content to hold back on orders. Dry whey prices are around \$850 to \$890/ton, down about \$230 since early May. WPC-34 prices have fallen steadily since March, dropping \$350 to about \$1850/ton.

Lactose prices have fallen to about \$725/ton, down \$175 since mid-June. Production was up 4% in the first half and inventories are heavy.◆



Source: USDA, USDEC.