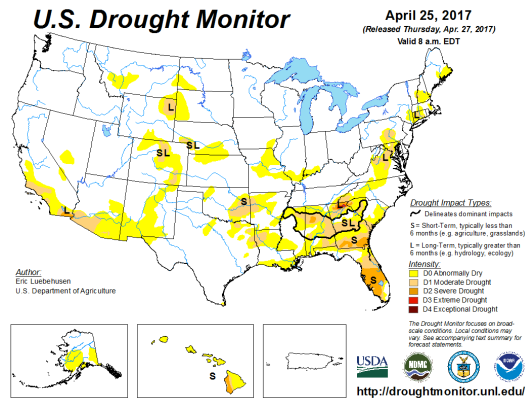
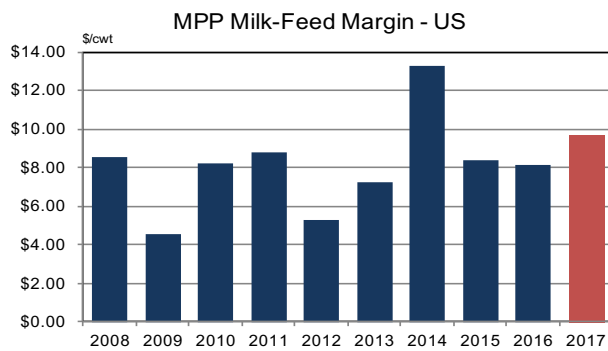


## DAIRY MARKETS – KEY DRIVERS

### Feed Prices & Dairy Farm Margins

For grain markets, bearish supply fundamentals were overshadowed by weather this week. Up to April 30, corn planting progress was 34% complete – on track with the 5-year average. But tractors came to a standstill across the Corn Belt as heavy rains passed through over the weekend. Localized flooding will delay field work and cool, cloudy weather this week has not helped fields dry out. While modern equipment can plant corn in a hurry, this week’s delay was enough to bump up corn futures prices by 10-15 cents. More broadly, the forecast is for another large US corn and soybean crop, which will only add to the growing global stockpile of grains. Without adverse weather this summer in the US, grain prices are expected to move lower from current levels. For dairy farm margins, there is little change from last month.

At last week’s ADPI conference, Jon Davis of Riskpulse provided his outlook for US weather. He is predicting a warm summer in the Midwest and East, which is good for crops, but could result in elevated stress levels in cows (leading to lower milk production). As for El Nino, the equatorial Pacific is close to El Nino levels currently, but over the next 6 months, only a weak event is expected and it likely won’t have global ramifications. For the US, there are very few areas with drought asides from the Southeast. In short, there are no obvious watch-outs on weather at this point.



### Milk Production

In general, milk output has been recovering in the key supply regions – US, Europe, and Oceania – albeit at different rates. With stronger milk prices globally, combined output from the major exporting countries/regions is expected to turn positive by the 2<sup>nd</sup> half of the year.

Europe has pared its losses from Q4 and is seeing small growth in several countries this spring. However, overall milk production remains below last year’s levels. Opinions are mixed on the outlook for the rest of the year. With milk prices in the low-mid 30’s, farmers are making money and have the incentive to

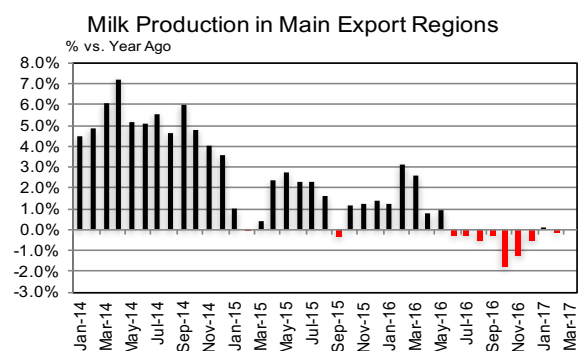
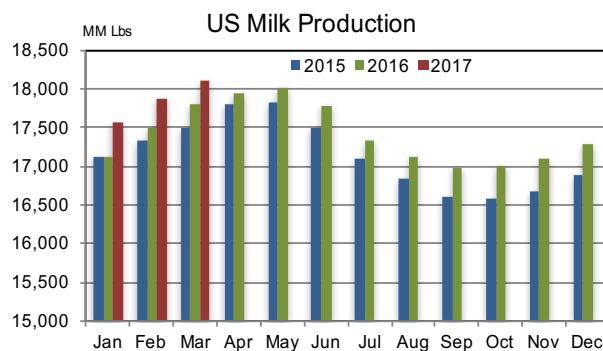
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expand. A recent EU forecast expected growth of 0.6% for the year, which would imply 1% increases in the second half. With Germany off to a slow start this spring, and the Netherlands likely to contract due to lower cow numbers, it might be difficult to hit the EU's forecast.

In the US, milk production grew 1.7% vs. year ago in March, slowing from recent months of 2+% growth. Cow numbers increased another 15,000 head during the month and stand at a 21-year high, thereby providing plenty of firepower for additional milk growth this year. Weakness in California and the Pacific Northwest was more than offset by growth in other parts of the country. With lots of cows and a mildly positive farm margin outlook, milk production is forecasted to continue to expand this year. While the year-over-year comparisons become more difficult as the year progresses, 1.5-2.0% growth is still expected.

New Zealand surprised with a strong jump in milk output in March – up over 9% vs. year ago. However, the enthusiasm was quickly tempered by heavy rains and flooding on the North Island in April. While it is late in the season, the drop-off in April is expected to be significant. Looking ahead to the next season, like in Europe, milk prices have moved to profitable levels. Given normal weather, milk output is expected to increase modestly in the 2017/18 season.



## US Demand

In 2016, US cheese and butter demand posted strong growth and provided solid support to commodity prices. However, domestic dairy demand slowed noticeably in Q1, raising questions about the strength of the economy for the rest of 2017, and how this impacts dairy prices. Recently released gross domestic product (GDP) data showed the US economy's output grew at the slowest pace in three years during the first quarter. GDP, the broadest measure of goods and services produced in the US, rose 0.7%, at a seasonally adjusted annual rate in Q1. This was the economy's weakest quarter since early 2014. The main factor behind the latest slowdown: sluggish consumer spending. Household outlays grew by the smallest amount since late 2009, as Americans reduced purchases of big-ticket items like cars and spent less on home heating during the warm winter. Rising inflation also cut into Americans' paychecks. Retailers have posted weak sales results in Q1 with blame being spread across a variety of reasons – gas prices, weather, Amazon, etc. If the economy doesn't pick up from Q1's pace, demand for dairy commodities, primarily cheese and butter, will likely not be enough to keep up with growing supplies.

## China

In March, China imported 30% less whole milk powder (WMP) from a year ago. China's skim milk powder (SMP) imports were about even with last year. But given the large share of WMP, the combined milk powder imports were down 21% from last year. However, looking at the first quarter in total, China's milk powder imports were down only 1.4% vs. prior year. UHT milk imports were also lower – down 25% vs. year ago in March and down 15% for Q1. On the positive side, China imported more cheese in March – up 23% vs. year ago with Q1 up 18%. In addition, China imported about 105 million lbs of whey products in March, which was 13% higher than prior year. Whey product exports to China from the US were record

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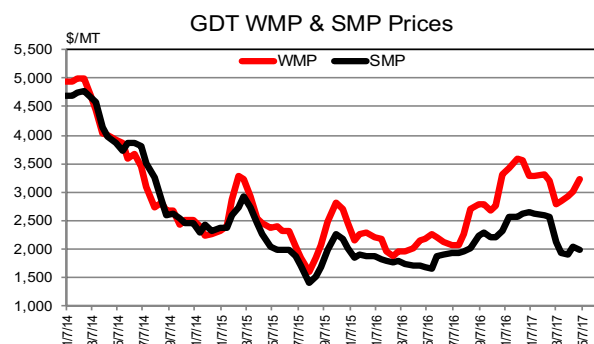
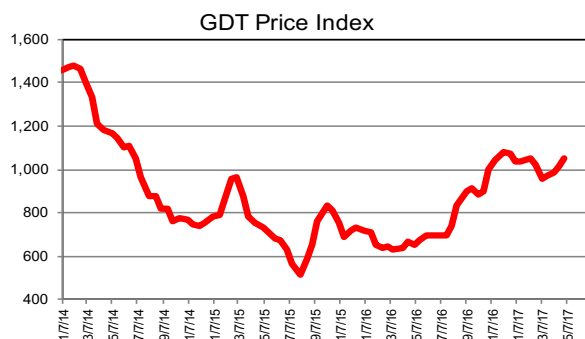
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large in March, accounting for nearly two thirds of China’s whey purchases. Whey imports were up 12% from last year in Q1 while imports from the US were 26% higher.

## DAIRY MARKET OUTLOOK

Last week’s ADPI conference always features a large gathering of the dairy industry with plenty of talk about future market direction. I moderated the panel discussion for the market outlook and opened by saying the tone had changed from bullish at the first of the year to a bit bearish now. Overall, it was not an exciting outlook as no big price changes are expected. The general consensus from the meeting was the markets are pretty well balanced and the price outlook was generally sideways with some variation depending on the product. For most, stable prices are likely welcome news. But several cautioned, if everyone is thinking the same thing, look out, because everyone will likely be wrong.

With the exception of SMP, all products were higher on this week’s GDT auction. From a volume standpoint, WMP pulled the overall index higher – the fourth straight increase. The index has mostly recovered back to the level seen in December. Reportedly, Chinese buying interest was a main catalyst for higher prices in this week’s auction. Interestingly, the gap between WMP and SMP opened even wider with a \$1,250/MT (\$0.57/lb) spread between the two products. The mountain of SMP in Europe is weighing down that market while WMP supplies are more in line with demand currently. In addition, for the first time in several years, US prices for cheese and butter are discount to both Europe and NZ. That will likely spark some export interest for both products.



Product	US	Europe	GDT/NZ
<b>Cheese</b>	\$1.48	\$1.54	\$1.66
<b>Butter</b>	\$2.12	\$2.21	\$2.23
<b>SMP/NFDM</b>	\$0.85	\$0.86	\$0.90
<b>Dry Whey</b>	\$0.53	\$0.43	\$0.47

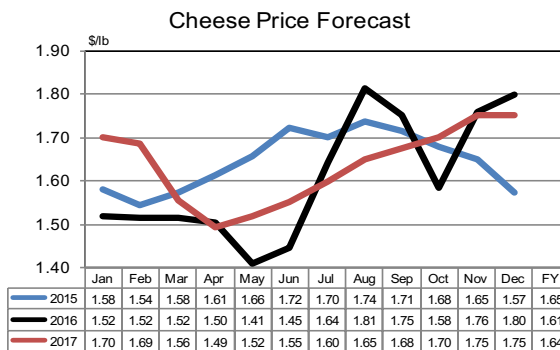
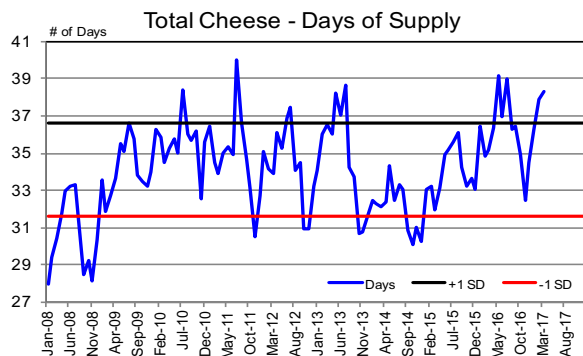
### Cheese

My outlook for cheese prices is lowered slightly from last month as the stocks build and production outlook continues to weigh on prices. Last week’s cheese stocks number was bearish on the surface. The increase during March was twice the average rate and the absolute number, 1.29 billion lbs, is a big one. However, demand grows every year for cheese, so it is natural that more cheese is made and stored just to keep up with demand. A more accurate way of evaluating the cheese stocks data is to translate it into a days of supply number. On that basis, the March 31 cheese days of supply is still large, but does not stand out as much as the actual stocks number. Milk production and cheese production will continue to post solid gains this year, and therefore, stocks will continue to grow – the supply side of the equation is pretty clear. The demand side is hazier. My cheese price forecast is based on a bounce back in domestic demand to year

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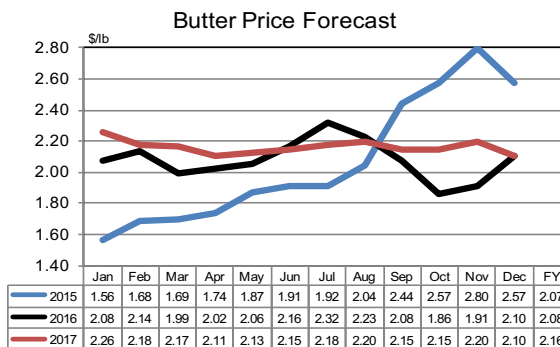
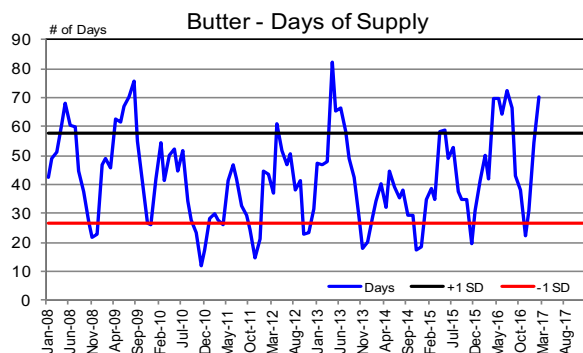
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ago levels. If that doesn't happen, my forecast is 10-20 cents to high. Cheese exports should increase given the US discount to global prices currently. That will help clear some excess supply and buoy prices. For the next few months, I expect cheese prices to trade in the \$1.40-1.50's with a higher probability of slipping below that range than exceeding it.



## Butter

Butter has been, and continues to be, the most bullish dairy product in the complex. Global prices are moving higher as fat supplies are tight. In the US, butter stocks saw little change during March, likely due to Easter Days demand, but are above last year's levels. Like cheese, the days of supply calculation factors demand into the stocks figure and shows an ample, but not burdensome, stocks picture. US butter prices have traded in a tight band around \$2.10 for about 3 months. Cream supplies are abundant and multiples have been low, however, butter production in January and February was slightly below last year. With high butter prices, manufacturers may have been reluctant to build stocks fearing the potential for inventory devaluation if prices fell. This becomes self-fulfilling as stocks don't build and prices stay high. I expect production and stocks to build through the spring, but prices are forecasted to remain in the \$2.10-2.20 range into the fall, with potential for higher price spikes. Looking at the domestic situation in isolation, prices should be lower than where they are today. However, with higher global prices and a tight global fat balance, I believe that is supportive to US butter prices. And I keep pointing out that a new equilibrium price level has been set for butter where even with seemingly bearish fundamentals, the butter price remains above \$2.00. I don't see that changing given the inelasticity of butter demand.



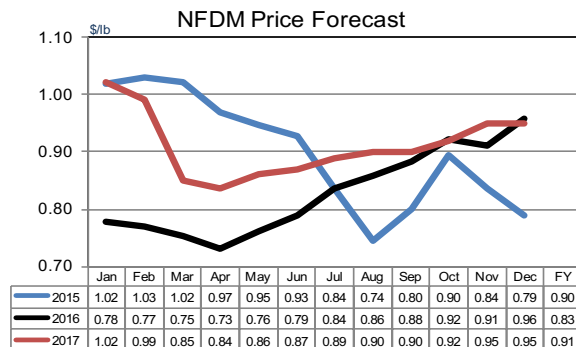
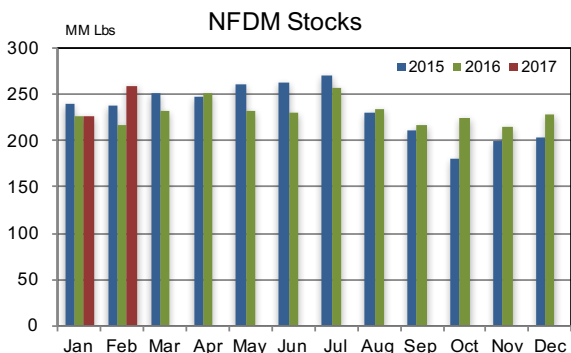
## NFDM/SMP

Despite a heavy supply situation, SMP/NFDM prices have stabilized and shown small signs of strength in recent weeks. Early in the year, the expectation was for a drawdown in EU intervention stocks of SMP. Instead, product has been moving into intervention over the last few weeks, adding to what is already a sizeable mountain of milk powder. In the US, milk powder production is up, and while exports have been strong, stocks have moved higher. The February 28 stocks total is the highest since July 2015. Buyers

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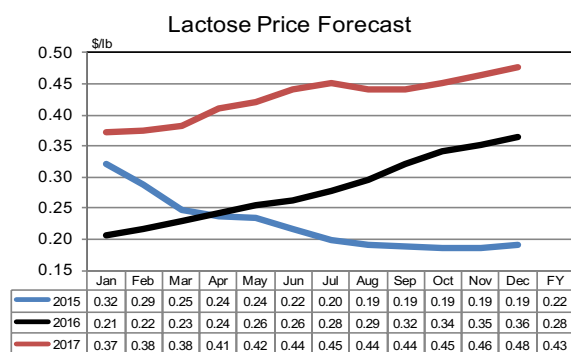
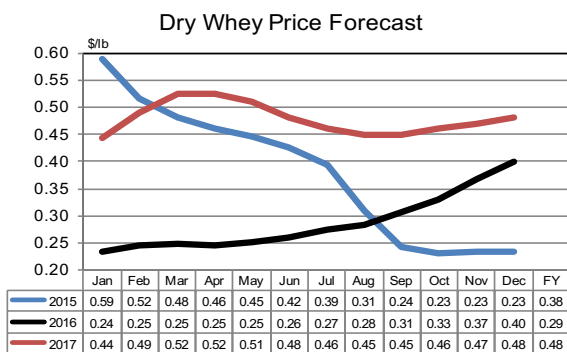
have been stockpiling milk powder for a year and this will continue in 2017 as prices remain low. My forecast is lowered slightly from last month as the EU intervention stocks will continue to weigh on the market making any meaningful price recovery difficult.



### Whey Products

As noted earlier, Chinese demand for dry whey has been solid, which has helped drive the US price to the highest level in over 2 years. US dry whey production was up 7% in February, but stocks remained below year ago, given the strong export demand. However, buyer pushback is being noted and the Dairy Market News price series has shown prices softening in the last few weeks. While the NDPSR price remains around \$0.53, product is being offered in the upper \$0.40's. My forecast points to an upcoming drop in prices back below \$0.50. If China slows in their purchases, whey prices could easily sink 5-10 cents. For now, I am expecting prices to fall to the mid-\$0.40's over the summer with a slight uptick at the end of the year. Futures prices are undervalued in my opinion.

Lactose prices have been moving higher, but are still discount to whey prices. Demand for SMP standardization appears to have picked up and the market tone is rated as firm. With the GDT (EU) price at \$0.43, more upside to US lactose prices is forecasted.



For the higher protein products, the market is relatively stable for WPC 80 and mixed for WPC 34. As detailed in prior reports, the WPC 34 market is being pulled lower by the weak NFDM/SMP price, but the price range is abnormally wide with food grade product selling for a significant premium to the AOM price. Production of WPC 80 and WPI posted double-digit increases in February. Export demand for WPC 80 was strong in February, so stocks fell 18% below year ago levels. However, the additional supply of WPI has overwhelmed demand and stocks have ballooned to 48% above last year. With continued cheese production growth expected, production of whey products will continue to expand. The price outlook for the higher protein products is sideways to slightly higher.

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## Purchasing and Risk Management Strategies

### Cheese

- With futures dropping to under \$1.70 full year average, price levels are likely attractive relative to a budget forecast for end users. The fundamentals look heavy, so a strategy can be more conservative. If prices drop farther in Q2, that could set the market up for a rally in the 2<sup>nd</sup> half like last year. Options coverage in the \$1.70 area looks like a prudent strategy for later in the year.

### Butter

- There continues to be strong demand for deferred coverage in butter futures, so second half futures are well supported. Coverage near \$2.15 offers the opportunity to get some protection in place.
- Cream multiples have weakened and cream markets are expected to be well supplied in the Eastern half of the country through mid-year, so low spot multiples could provide an opportunity to buy cheap cream and build inventory.
- If cash prices drop to the \$2.00-2.10 range, opportunities for selling deferred futures (coverage hedge) could present themselves.

### NFDM/Milk Powders

- At this point, end users could have most/all of 2017 booked at prices likely favorable to their budgets. For any uncovered volume, the relatively low cash and futures prices offers the chance to wrap up coverage for the year.
- If possible, buy more physical coverage to extend into 2018 as this is the cheapest way to get coverage.

### Whey Complex

- Dry whey futures in the second half continue to trade at a discount to my forecast. This may offer an opportunity to get some coverage in place. For WPC 34 and 80, extending ownership through inventory or forward contracts is recommended.

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