

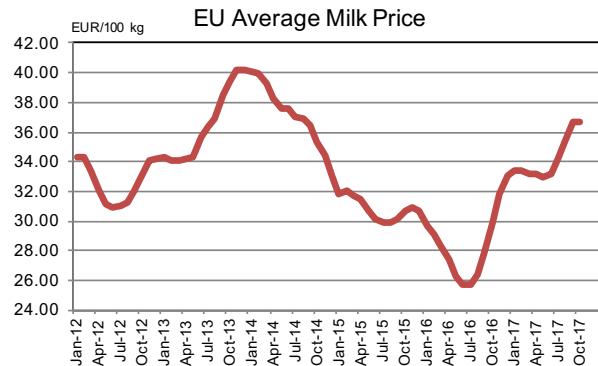
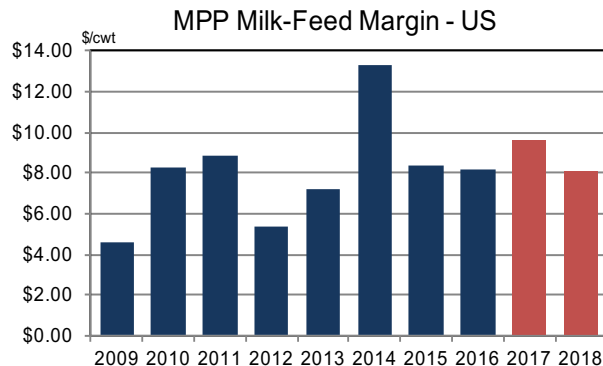


Feed Prices & Dairy Farm Margins

Summary: The US dairy farm margin outlook has worsened in the last month with lower milk futures prices and higher feed costs. The US dairy farmer is going to be the first one to feel the impact of lower global dairy commodity prices.

In the US, harvest is mostly complete with large crops of corn and soybeans. Futures prices for corn have been relatively stable, and low, over the past few months. With large stocks, the outlook is for more of the same, which is welcome for dairy farms buying feed. However, one watch-out is weather for the South American crop. Futures prices for soybeans, and less so for corn, have moved higher recently over concerns that weather is less than optimal. If grain prices increase due to South American crop concerns, dairy farm margins would further erode.

Dairy farm margins are positive with some regions faring better than others. The US dairy farm margin, as measured by the MPP, slipped about \$0.50/cwt over the last month. The projected margin is now below the 10-year average and the total margin is likely worse given the increase in non-feed costs. The current milk price situation is more favorable for dairy farms in Europe and New Zealand. As the graph below shows, European milk prices have moved up this year and are not far from 2014 highs. In fact, some milk buyers are paying near 40 EUR/100 kg for December milk. This is somewhat puzzling given the deteriorating dairy commodity prices. However, one large European dairy company recently noted higher retail prices give them the ability to increase milk prices. While this is welcomed by dairy farmers, it will probably end poorly as milk prices could fall sharply, particularly as cheese prices move lower and SMP prices remain near current levels. That could lead to calls for more government involvement to reduce milk price volatility. In New Zealand earlier today, Fonterra reduced its forecast for the milk price payout from \$6.75/kg milk solids to \$6.40. The lower price is being justified by global price volatility and continued strong production out of Europe along with the SMP intervention stocks. A price of \$6.40 is still quite profitable, but may dampen the mood of farmers, which could slow the expansion of milk supplies. Fonterra also noted some weather challenges and lowered their forecast for milk collections this season by 1% to 1,525 MM kg milk solids.



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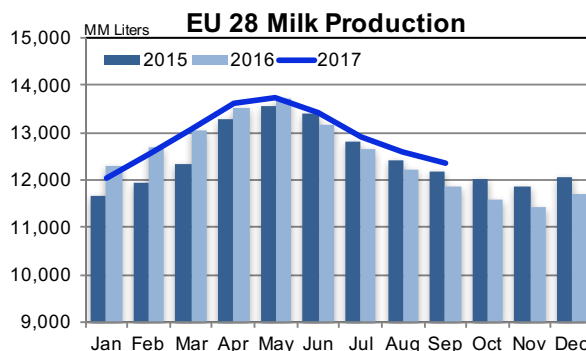
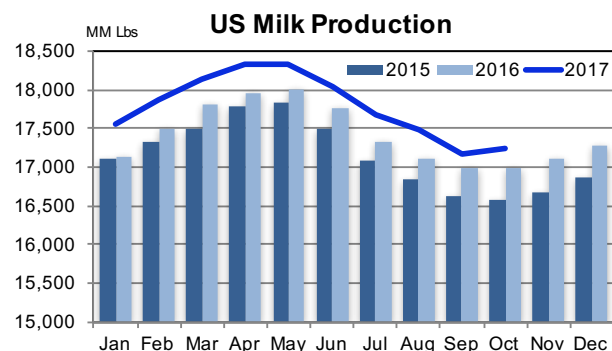
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Milk Production

Summary: The pace of US milk production growth is easing while European output is posting strong gains over last year. New Zealand milk production rebounded with a gain of 2.7% vs. last year in October. However, concerns about dry summer weather are increasing.

US milk production grew 1.4% in October, a slowdown from the 2+% pace seen for the prior year. Losses continue in the western states, but were offset by growth in the rest of the country, primarily the Southwest and Midwest. Dairy cow numbers have stopped expanding and have stabilized around 9.4 million head – the highest level since Q1 1996. If farm margins shrink as expected, the culling rate could increase and dairy cow numbers would gradually decline. My price forecasts are predicated on a slowdown in milk production by mid-2018 as the expansion cycle comes to an end. Milk output is not expected to turn negative, but growth will be closer to 1% than 2%.

Milk production is climbing rapidly in Europe as high milk prices have encouraged growth in most countries. In addition, Q4 growth rates will look quite high due to the comparison to a weak Q4 2016. September production was up 4.3% vs. prior year – the strongest growth rate since March 2016. While October data is not available yet, some individual countries have reported strong gains – Poland, Netherlands, Ireland, Denmark, and Belgium. It should not be surprising to see growth near or above 5% in Q4. At a time when farmers should be getting a signal to slow production, instead, they are accelerating growth. As noted above, this will end poorly. One early sign is this week's announcement from Muller for a 1.5p per liter drop in their UK milk price. Headlines proclaimed it "shocking" and "massive." Expect similar stories in coming months as milk prices start to fall and farmers complain about price volatility out of their control. Part of the solution is the development of risk management tools like the US started in the 1990's following deregulation as the EU recently experienced.



In New Zealand, conditions have gone from a very wet, cold spring to risk of a hot, dry summer. La Nina conditions are present in the tropical Pacific, but impacts will vary. The latest outlook for New Zealand weather from their national weather agency (NIWA) is for December-February temperatures to be above average for all regions of the country. In addition, coastal water temperatures are forecast to remain above average for the next 3 months. Hot, dry weather is not helpful for grass growth and therefore, milk production. How much the weather impacts milk output will depend on the length and severity of any hot, dry spell. The last data point for milk production is October and it showed a 2.7% gain from last year, reversing 2 months of losses. But the focus has now shifted to weather and production over the next few months.

Demand

Summary: US dairy product demand is mixed with fluid milk sales continuing to slide while cheese and butter experience modest growth. US dairy exports rebounded from a poor September, but remained below year ago in October. Chinese dairy imports continue to increase vs. prior year.

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By this point in the year, holiday orders have been placed and promotions are set. If holiday demand is better than planned, more aggressive back-filling of the pipeline could provide a brief boost to US cheese and butter prices to start the new year. However, retail sales of both products have reportedly been lackluster for most of the year. There is an issue with non-measured channels missing some sales, so retail demand might not be as bad as first thought when looking at IRI or Nielsen data. A stronger economy would be positive for dairy product sales in 2018. However, an improving economy in 2017 hasn't provided much of a lift to sales, so it's questionable if retail sales can bounce back to growth in 2018. In addition, Kraft has reduced trade spending/promo's on cheese in 2017, which has probably resulted in slower category sales. Given their hyper focus on margins, they may continue to hold back on trade dollars.

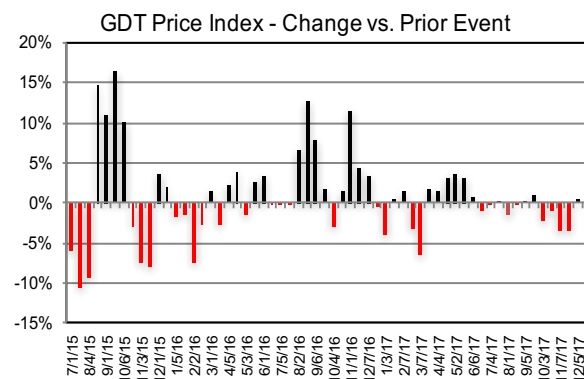
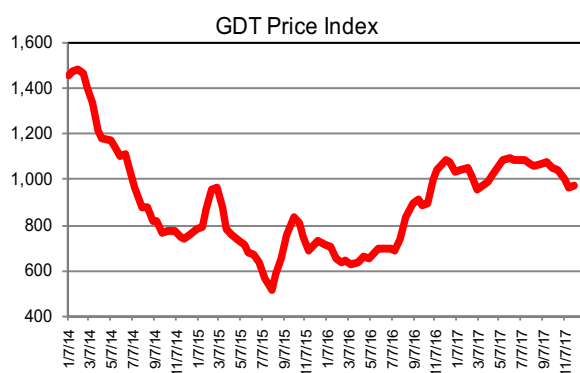
Recent news out of China regarding the lowering of import tariff rates on cheese and several other dairy products is being viewed as bullish by US exporters. Due to increasing consumer demand, the Chinese government is lowering the tariff from 12% to 8% on cheese and from 15-20% to 0-2% on hydrolyzed protein formula for people with special nutritional needs and pre-packaged infant foods. The tariff reduction should allow for higher imports of those products.

China posted another strong month for dairy import volumes in October. Whole milk powder imports were nearly double last year, but did decline 16% from prior month. For the first 10 months of the year, WMP imports were only slightly below last year's total. Skim milk powder (SMP) saw imports increase 75% vs. last year. To date, imports are up 35% from the same period last year. Cheese imports set a new monthly high for October hitting 18.5 million pounds, which is up 5.5% vs. last year. Importantly for the whey market, whey imports were higher than last year, but the pace has slowed from earlier in the year, which has been reflected in softer global prices. October shipments of dry whey were up only 2.7% vs. prior year with 55% coming from the US.

Dairy Market Outlook

Summary: Supplies for milk powders and whey products are burdensome and prices have moved lower over recent months. The outlook for supply growth points to continued weakness for these products. Cheese and butter markets are relatively closer to being in balance, but more milk and cheese production in Europe is beginning to push prices lower. In short, it's a buyer's market.

Yesterday's GDT auction saw a slight uptick in prices, reflecting some concern from buyers over the recent dry weather in New Zealand. However, other analysts note concerns about NZ weather have become an annual event. Over the last few years, there have been several "false" rallies due to weather scares. Time will tell if this is a false alarm or real. For now, the threat of unfavorable NZ weather joins a short list of potential bullish factors for 2018.



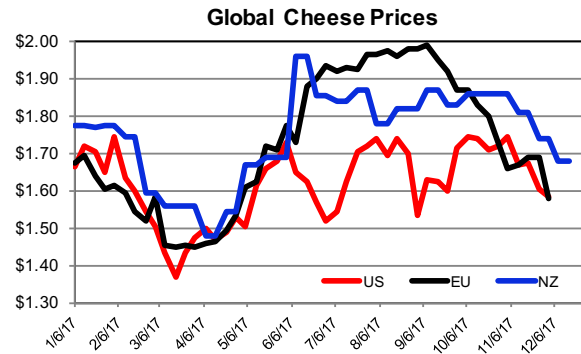
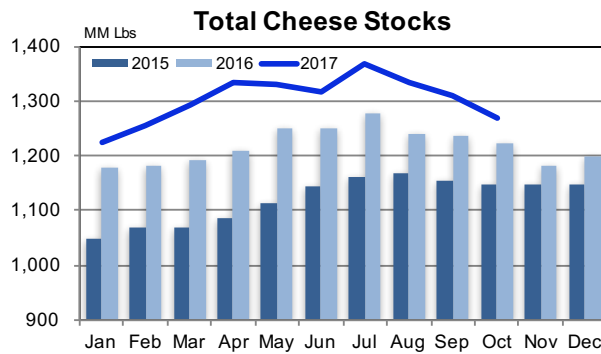
Cheese

Summary: European cheese prices are moving lower and putting pressure on US prices. My outlook for US cheese prices has been lowered to the \$1.40's for the first part of the year with a recovery to \$1.70-1.75 by Q4. Lower European prices will soon hurt US export competitiveness.

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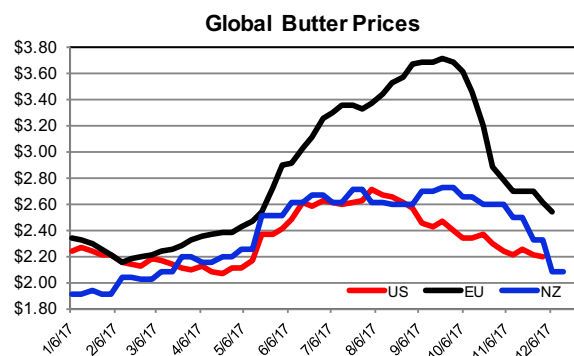
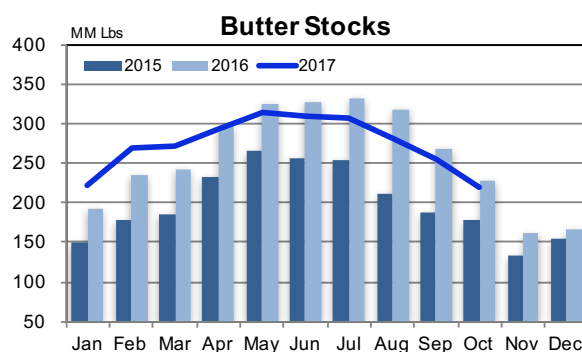
In the US, cheese production was up 1.7% vs. year ago in October as the pace of milk production growth has slowed. Cheese stocks fell more than normal in October, which implies strong domestic demand for the month. Going forward, it is expected US cheese exports will face more competition from Europe as prices are falling. I have heard reports of aggressive pricing for cheese out of Europe – as low as \$1.25-1.30 for Gouda and Mozzarella. My outlook for cheese prices has been lowered in the 1st half with prices in the \$1.45-1.55 range, but a stronger recovery in the 2nd half with prices up to \$1.70-1.75 by Q4.



Butter

Summary: The butter price mania in Europe is over and New Zealand prices have dropped below the US price, which has been relatively stable for the past few months. Until more of the milk growth in Europe ends up in a butter churn, butter prices should find some stability soon.

In the US, butter stocks moved lower in October, but at an average pace for the month. Stocks should bottom out above 150 MM lbs and then start the build into next spring. Demand for end-user coverage remains strong and should support prices around the \$2.20 level into Q1. By mid-year, new production capacity could dampen fall price rallies and potentially push prices lower. In Europe, 2018 futures for the first half are in the \$2.15-2.20 area (€4000). Currently, returns favor moving milk into cheese over butter-powder. With the uncertainty of the SMP intervention program for 2018, dairy companies are nervous about making more powder, so butter stocks may remain tight into spring. This math could change if cheese prices keep moving lower and switch the advantage to butter-powder. My forecast assumes European, NZ, and US prices consolidate in the low \$2.00's (€4000) to start 2018. AMF prices on GDT are quite high relative to butter, so the spread should narrow in future auctions with lower AMF prices more probable than higher butter prices.



NFDM/SMP

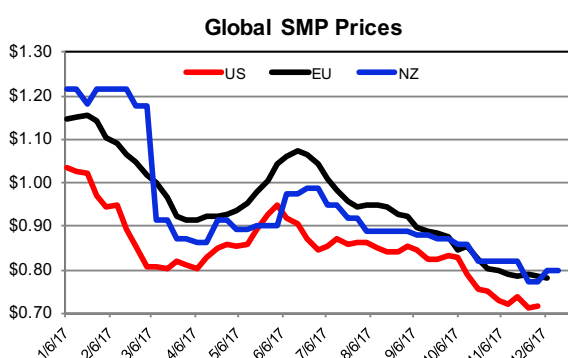
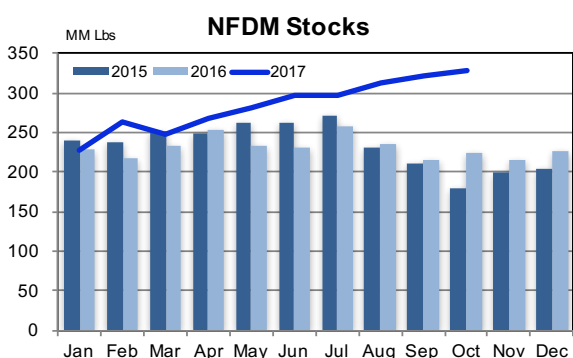
Summary: The NFDM/SMP market remains the weakest in the dairy complex with burdensome supplies and uncertainty surrounding the EU intervention program and NAFTA talks.

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The latest data on the US milk powder market shows stocks continue to build despite lower total NFDM/SMP production and stronger exports in October. Stocks are well above year ago levels and represent close to nearly 2 months of US production. Despite lower milk production in California, the largest producing state in the US, milk powder production continues to grow as new plants open in the Southwest. In 2018, 2 more plants will come online adding more production to an already oversupplied market. In Europe, as noted earlier, processors are trying to keep milk away from milk powder plants. But the substantial stockpile of EU intervention stocks of SMP, along with potential changes to the program in 2018, continue to exert downward pressure on prices.

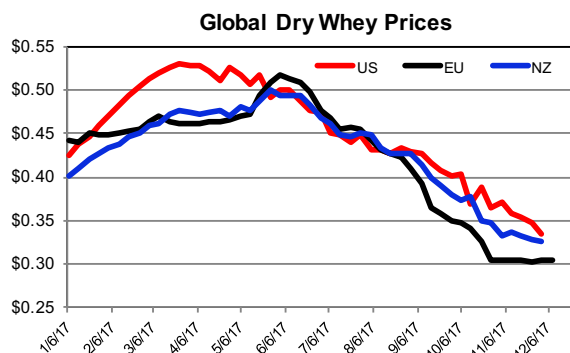
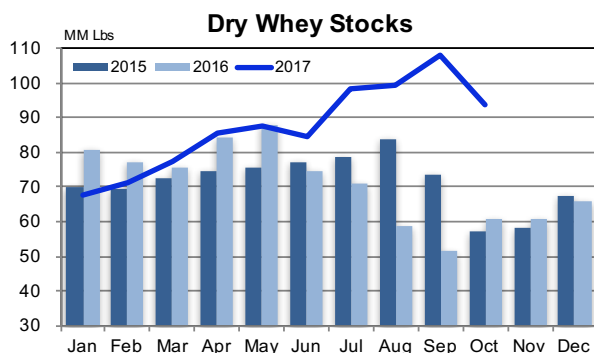
Given what seems to be a long list of bearish factors, it is easy to believe prices have farther to fall. But as the old saying goes, it is always darkest before the dawn. It seems prices are finding an equilibrium level and the uptick in GDT prices could bring in some buyers from the sidelines, at least temporarily. While the EU SMP stocks continue to hang over the market, their value is shifting more to animal feed rather than human use. A recent tender had a low of €800 – a price much closer to dry whey than SMP. I'm not saying a price rally is eminent. In fact, my forecast is for prices near current levels into mid-2018 before a modest recovery in 2nd half. The big unknowns are the SMP intervention program details for 2018 and the NAFTA talks - both have the ability to push prices lower than currently forecasted.



Whey Products

Summary: The whey complex is suffering under the same oversupply issues as milk powders. Higher cheese production is turning out more whey products and prices are moving lower.

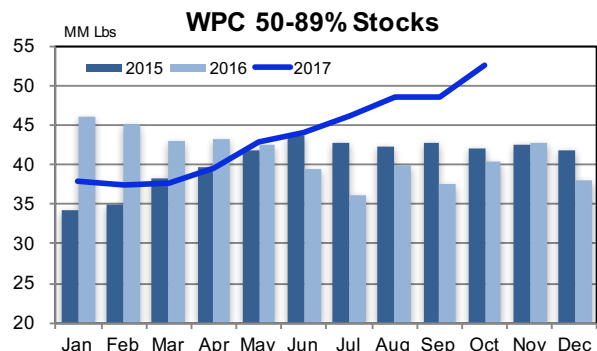
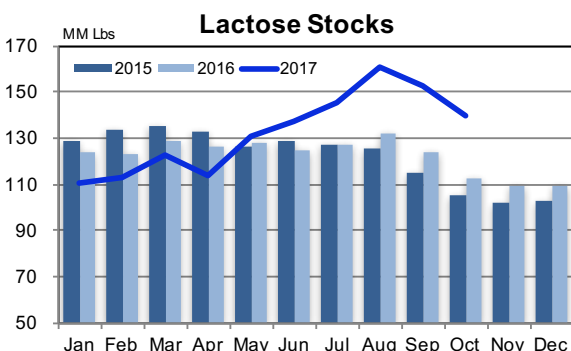
In the US dry whey market, production eased in October, and with higher exports, stocks fell during the month. But, stocks remain well above last year's levels and represent a month's worth of production. The NDPSR price is slowly moving lower although spot prices are reportedly in the mid-upper \$0.20's. Both EU and NZ prices show signs of leveling off, but the EU SMP stocks are expected to keep pressure on prices into next spring. My forecast is for the NDPSR price to fall to \$0.30 in Q1 with modest recovery in the 2nd half of the year, similar to other products. Until stocks fall back near year ago levels, buyers will remain confident and continue to be conservative with their purchasing strategies.



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The lactose market is suffering under similar fundamentals as the dry whey market and prices have fallen. However, stocks have moved lower over the last 2 months, although like dry whey, remain well above last year's levels. In conversations this week, buyers are covered into early 2018 and are not interested in buying more at this point. My forecast is for prices to find a bottom in the low \$0.20's before gradually moving higher as buyers come back to the market in Q1.



While stocks are moving lower for dry whey and lactose, they continue to climb for WPC 80 (50-89%). October production for WPC 50-89% was 6% above last year and total WPC exports were higher as well. So, the increase in stocks implies domestic demand is weak. This aligns with discussions from manufacturers that comment demand from sports nutrition companies has weakened considerably in recent months, likely due to high inventories. I have been optimistic WPC 80 prices could hold in the \$2.50-2.60's into Q1, but prices have tumbled over the last month. As a result, I lowered my forecast to \$2.15-2.25 for first half. There are reports of sub-\$2.00 product on a spot basis, but I have not heard of "reputation brand" product at that level. Contract pricing for Q1 is reportedly in the \$2.10-2.25 area. Like the other products, until stocks begin to drop and get back closer to last year's levels, prices will remain under pressure.

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