

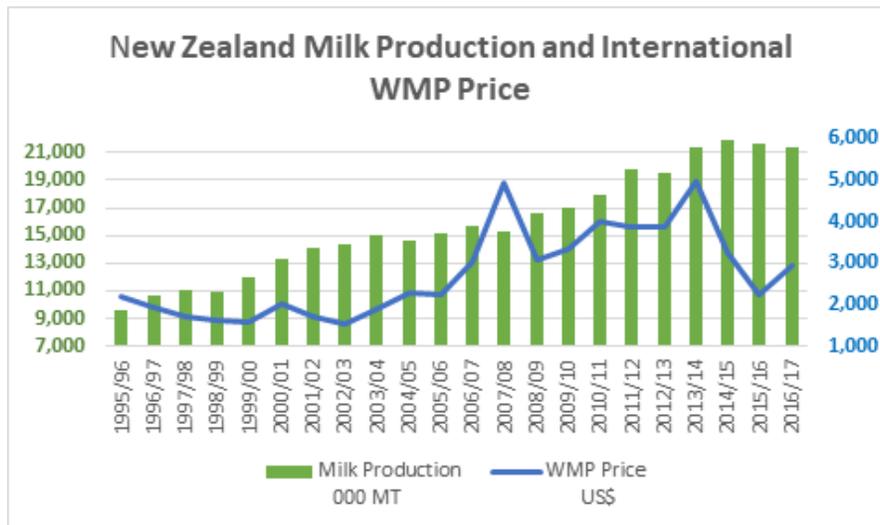


New Zealand Milk Production and Impact on Demand for US Dairy Ingredients

Trends in the volume of milk produced in New Zealand can have substantial up and down effects on demand for US dairy ingredients. The New Zealand and US dairy industries have overlapping market interests. Both countries are major exporters to global markets and compete for international business in several key ingredient categories including:

- Skim Milk Powder
- Milk Protein Concentrates/Isolate
- Cheese
- Whey Protein Concentrates

Furthermore, because the US dairy market is very large and open to imports it attracts the attention of New Zealand suppliers for several of the products listed above as well as other dairy ingredients such as milkfat and casein. Resulting from its presence in both the international and domestic US market, competition from New Zealand is therefore a constant factor for US ingredient suppliers. The intensity of this competition can fluctuate significantly depending on milk supply from NZ producers.



The primary drivers of milk production in New Zealand are markets conditions and climate. As shownn the figure above production has fallen below prior year levels on six occasions over the past twenty years. The

most recent downturn in 2015-2017 is essentially market based due to weaker global demand and lower milk prices. Previous drops in output such as in 2013, 2007 and 1998 were events caused by weather. Production is pasture based and as a result is relatively volatile. Hot dry conditions extending to drought will have negative effects on grass growth and the production of grass dry matter per hectare. Intake of grass dry matter by cows determines milk production.

Trends in New Zealand milk supply especially weather related changes constitute a wild card in the operation of global dairy markets. Favorable circumstances for milk production can result in product oversupply to the market and increased competition. On the other hand difficult conditions for milk production can quickly result in a tightening of the market and an escalation in prices due to constraints on product availability. Both of these situations have occurred over the years. On occasion restricted milk supply has been severe enough to result in rationing of product availability to NZ customers. As shown in the figure this was the case for example in 2007 when drought severely impacted NZ milk output. Increased demand directed at other sources of supply including the United States ensued contributing to a substantial spike in dairy product prices.

Some New Zealand milk producers are able to sustain production during unfavorable conditions for grass growth through the use of irrigation. However this capability is limited and comes under pressure during periods of severe drought. Irrigation infrastructure is most heavily concentrated on the South Island and as a result there can be varying regional differences in the response to weather conditions. Some products may experience greater tightening in supply due to location factors when milk production is curtailed. Looking forward there are indications that weather events may pose a larger risk for milk supply than in the past. It is worth noting that previous shocks would have been cushioned to a certain extent by the underlying expansionary trend. Land conversions to dairy production and additional cows were able to help maintain forward momentum despite difficult pasture conditions. However long term growth in milk production is slowing. The cushion provided by year to year net increases in production capacity will not have as much weight in the future. Weather related reversals in production may be larger in the future than in the past.

*Sources: New Zealand Dairy Statistic 2015-2016. Published by Livestock Improvement Corporation Limited & DairyNZ Limited <https://www.dairynz.co.nz>
International Dairy Product Prices at <http://future.aae.wisc.edu/tab/prices.html#30> University of Wisconsin home page for Dairy Marketing and Risk Management Program

Contributor:

Michael Culhane

Dairy Advance Business Consulting LLC

Phone: 608-325-4543

Email: mculhane@dairyadvance.com

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