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# GAIN Report

Global Agricultural Information Network

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## **New Zealand**

### **Dairy and Products Annual**

#### **Milk Supply, Dairy Production and Exports Report**

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**Report Highlights:**

MY2010 milk production is estimated to be down by 3% caused by poor weather. As a result MY2010 exports plateaued even with a stocks reduction. If the weather is conducive milk supply in MY2011 will bounce back and break national production records, leading to a big jump in exports for the year.

# Executive Summary

## Overview

The dairy sector is New Zealand's top export earner and a key driver of economic growth. It accounts for nearly a quarter of total merchandise exports and approximately 7%-8% of GDP. The dairy processing industry is dominated by Fonterra Cooperative Ltd, the world's largest dairy processor and New Zealand's largest company. Fonterra collects an estimated 89.5% of the domestic milk supply and controls an estimated 40% of world trade in dairy products.

## Domestic Production

Fluid milk production for MY2010 (January to December 2010) is estimated at 16.9 million tons. This is a 3% decrease compared to last year. While the number of cows in milk is up 3.4%, a drought on the North Island during the first half of the year and a cold wet spring (August - September) erased any chance of national milk production reaching or exceeding last year's level.

Looking forward, fluid milk production is forecast to jump 10% hitting an all time high of 18.6 million tons in MY2011. This reflects an expected increase in cow numbers that will fully stock both recent dairy farm conversions and the 70-80 new farms conversions that will come on stream in MY2011. This estimate also assumes no adverse weather patterns significantly impacting on production.

Production of whole milk powder (WMP), New Zealand's number one export, is forecast to increase 62,000 tons, or 8%, reaching 830,000 tons in MY 2010.

Over the past few years, several new processors have set up shop in New Zealand. For most processors, WMP is still the most profitable commodity to produce and virtually all of the additional processing capacity added over the last five years has been in the form of powder/drier facilities. Under the Dairy Industry Restructuring Act, these processors are eligible to obtain up to 50 million liters of regulated milk at a set price from Fonterra.

## Exports

In MY2009, New Zealand's dairy product exports fell to US \$5.7billion (-22%) but were up 32% on a volume basis to 2.34 million tons. So far this year (Jan-Aug), trade statistics show total export volumes are down 2.4% but, in USD terms, export receipts are up 40% compared with the same period last year.

MY2010 exports of the top four product categories (WMP, skim milk powder (SMP), butter/fats and cheese) are forecast to fall 15% to 1.7 million tons, largely because of the weather induced drop in milk production. However, exports are forecast to rebound (+22%) in MY2011 reaching a new high of over two million tons. This estimate takes into account an expected build up in inventories.

China is now New Zealand's largest dairy market on both a value and volume basis. Having overtaken the United States in MY2009, China accounted for 11.7% (US \$667.1 million) of total New Zealand dairy exports in MY2009. The United States is now the second largest market accounting for 9.5% (US \$541.8 million). WMP and SMP are still the leading exports to China but exports of other products, including butter fat, cheese, and whey products are growing in importance. By contrast, leading exports to the US market are milk protein concentrate (MPC) followed by fats and oils, casein, caseinates, and cheese.

The Middle East and Africa are becoming important regional destinations for New Zealand exports.

On a value basis, exports to the Middle East have trended upward at 18% to 19% per annum over the last decade. For Africa, the growth is approximately 25% per annum.

The Global Dairy Trade Auction platform began by Fonterra in July 2008 has gathered momentum

over time and is now seen as a barometer of Oceania pricing trends. In MY2009, approximately 10% of total exports were sold through the auction.

### **Government Policy**

New Zealand is aggressively negotiating free trade agreements (FTAs) in the Asia region. An FTA with China was implemented on October 1, 2008. An FTA with ten ASEAN countries and Australia is expected to be implemented next year, and an FTA with Malaysia, which was concluded in June 2010, is expected to be ratified later this year. New Zealand has also completed two rounds of negotiations towards a NZ-Korea FTA.

The Primary Growth Partnership (PGP) is a new Government supported innovation and research funding vehicle for the primary, forestry and food sectors. A dairy sector consortium has obtained NZ \$84.6 million in funding under the program for a seven-year research and development project.

### **Other**

In June 2010, Fonterra shareholders (farmer owners) voted to approve the third stage of capital restructuring – a share trading system among farmers. The proposal had overwhelming support among Fonterra’s farmer shareholders with a 90% approval rate among the nearly 79% of shareholders that voted. Fonterra is now working through the mechanics of actually getting the market up and running and has said it expects it to be in place by late 2011.

NZX, the New Zealand stock exchange, began offering futures contracts for whole milk powder in early October 2010, and had its first trade on October 12. Ten tons of whole milk powder traded at a listing price of US \$3,525 per ton. It is still too early to tell whether or not the new futures market will actively be used as a mechanism to manage risk.

### **Commodities:**

Dairy, Milk, Fluid

Dairy, Dry Whole Milk Powder

Dairy, Milk, Nonfat Dry

Dairy, Butter

Dairy, Cheese

## **Production**

### **Milk Supply MY2010 (Jan 2010 to Dec 2010)**

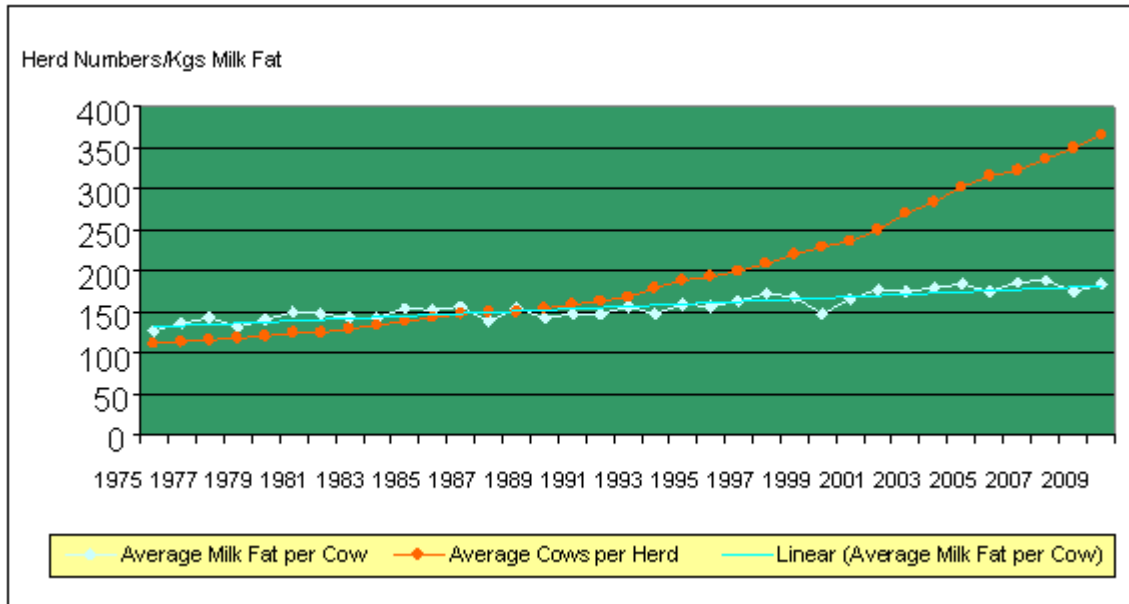
Milk production is forecast to fall to 16.9 million tons, down from 17.4 million tons in marketing year (MY) 2009; a 2.9% decrease. Adverse weather is the main factor accounting for the drop in production.

- A drought from January to June, 2010 in the regions of Waikato, Bay of Plenty, Northland, Manawatu, and parts of Taranaki negatively impacted milk production.
- Although there was favorable weather during the winter months of June and July over most of New Zealand, the capacity for both pastures and cows to bounce back to normal production was partly limited by relatively poor cow condition and low feed reserves.
- Even though production gains in the South Island were enough to push national production ahead of the previous year for the New Zealand production season (+2.9% by the end of May 2010), this was largely offset by a fall in production on the North Island.
- Rainfall in August and September was three to five times district averages in the regions of Waikato, Manawatu, and Taranaki, which, combined with below average temperatures, reduced pasture growth rates and utilization.
- An unseasonal and unusually heavy snowstorm in Southland in September set back both milk and pasture production.

In New Zealand, 40% of the annual milk supply is typically achieved during the first five months of the calendar year and the remaining 60% during the second seven months of the year. Given the adverse weather conditions noted above, in estimating MY2010 milk production, it was assumed that only 37% of total seasonal production was produced during the first six months of the year rather than the average 40%. Other relevant factors include the following:

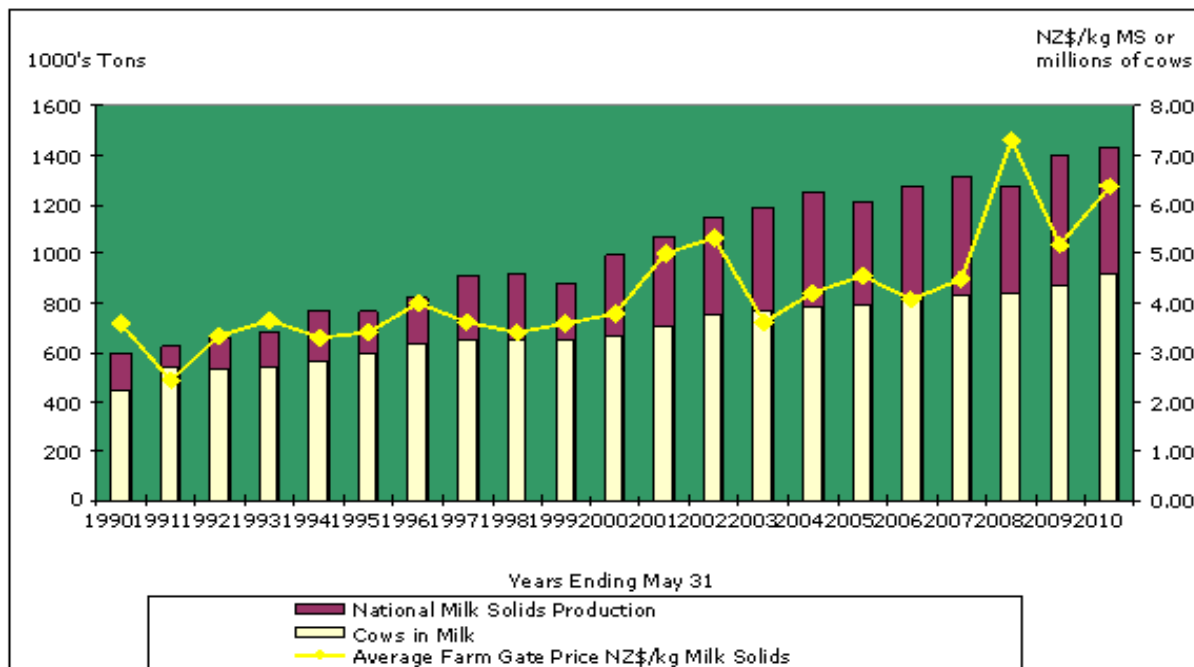
- The Ministry of Agriculture Forestry and Fisheries (MAF) estimated a 4.6% increase in cow numbers as of June 2010 relative to the previous year. According to estimates supplied by Beef + Lamb NZ, the total dairy herd increased by 2.4% and the number of cows in milk increased by 3.4%. (In light of the difficult spring weather conditions, the lower estimate seems more appropriate at this point in time.)
- According to estimates, between 60 and 70 new dairy farm conversions will come into production in August 2010. These new conversions account for the bulk of increased cow numbers.
- In June 2010, MAF forecasted production to jump 14% during the June 1, 2010 to May 31, 2011 period. However, MAF and other commentators are now expecting the increase to be in the vicinity of 5% to 10% (assuming no adverse weather conditions).

### Average Cow Numbers per Herd and Average Milk Fat Production per Cow (calendar year)



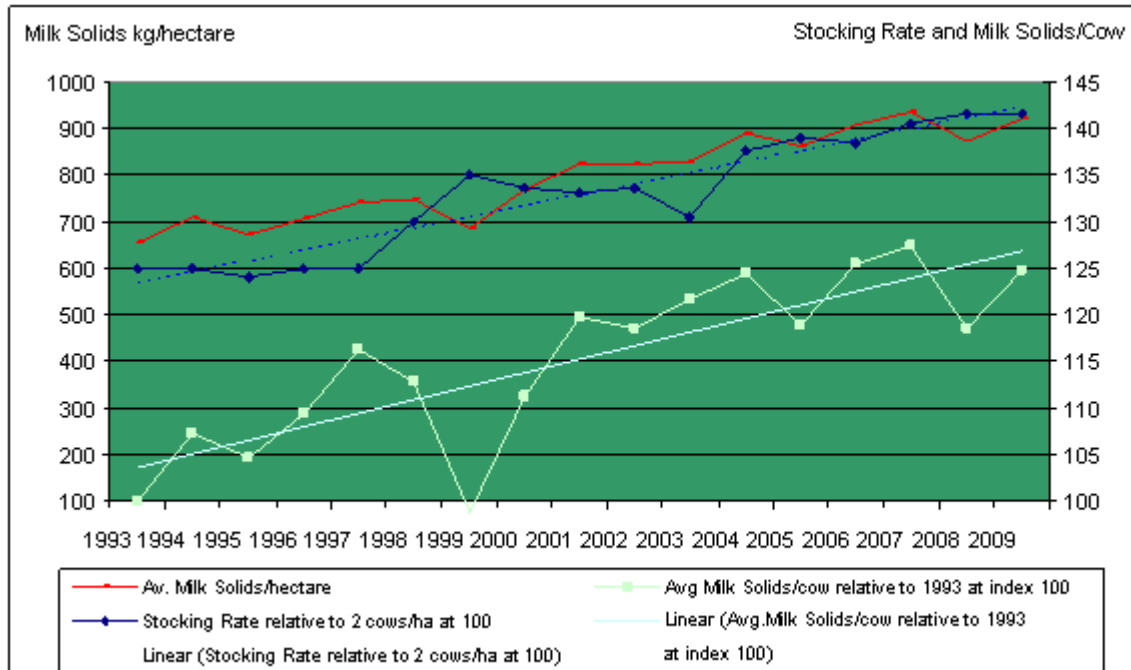
Source: Livestock Improvement Corporation (LIC), Dairy NZ, MAF, Stats NZ

### Milk Production, Cows in Milk and Average Farm Gate Prices



Source: LIC, Dairy NZ, MAF, Stats NZ

### Average On-Farm Milk Solids Production Compared with Stocking Rates



Source: LIC, Dairy NZ, MAF, Stats NZ

Profitability of Dairy Farming (NZ dollars per kilogram of milk solids)					
Key Indicator Category	FY 06	FY 07	FY 08	FY 09	FY 10 estimate
Milk Sales	4.13	4.12	7.35	5.20	6.35
Livestock Sales & Sundry Income	0.21	0.31	0.45	0.45	0.35
Change in Value Livestock	0.24	0.16	0.15	0.02	0.03
<b>Total Gross Income</b>	<b>4.58</b>	<b>4.59</b>	<b>7.95</b>	<b>5.67</b>	<b>6.73</b>
Farm Working Expenses	3.54	3.63	4.91	4.88	4.20
<b>Operating Profit</b>	<b>1.04</b>	<b>0.96</b>	<b>3.04</b>	<b>0.79</b>	<b>2.53</b>
Debt Servicing	0.98	1.01	1.30	1.58	1.50
Rent	0.10	0.10	0.09	0.12	0.08
<b>Net Profit</b>	<b>-0.04</b>	<b>-0.15</b>	<b>1.65</b>	<b>-0.91</b>	<b>0.95</b>

Notes

1. Sources: LIC, Dairy NZ, MAF, Stats NZ
2. Farm working expenses include depreciation and wages of management to the owner either real or adjusted.
3. Data has been collected from a sample of owner operated farms which comprise approximately 67% of all dairy farms

### Milk Supply MY2011

Milk production is estimated at 18.6 million tons in MY2011, a 10.3% increase. Factors accounting for the forecast increase include:

- An estimated 70 to 80 additional dairy farm conversions in 2011.

- If weather conditions are good, the realization of a pent up capacity to produce significantly more milk given the increase in land area devoted to dairy production, the increase in the number of cows, and ongoing genetic improvements to the national herd. Full production capacity has not been realized over the past two seasons due to adverse weather events.
- It is estimated there will be at least another 4 to 6% increase in seasonal milk supply from June 1, 2011 to May 31, 2012.

## MY 2012 and Beyond

The milk payout price, both actual and forecast, combined with on-going dairy farm conversions, will likely result in milk production gains of two to four percent per year over the near term but, if the stars align and weather conditions result in good pasture growth and well conditioned cows, gains could be much higher. While credit conditions are tight and expected to remain so in the near future, it is likely that 70 to 80 farms will be converted to dairy production every year over the next three to four years. Among other things, this trend reflects the relative profitability of dairy production versus sheep and beef farming.

<b>Payout Prices by NZ Dairy Cooperatives</b>			
<b>(Per Kg of Milk Solids)</b>			
<b>Company Name</b>	<b>Payout 2008/09</b>	<b>Payout 2009/10</b>	<b>Payout Forecast 2010/11</b>
Fonterra	NZ \$5.20	NZ \$6.37	NZ\$6.50-7.00
Tatua	NZ \$5.38	NZ \$6.32	n/a
Westland	NZ \$4.50	n/a	n/a

Over the longer term, there are several factors that could influence the expansion of New Zealand's dairy sector. One of the more highly controversial issues has been inclusion of the agricultural sector in New Zealand's Emissions Trading Scheme (ETS). While other sectors have already been brought under the scheme, the inclusion of agriculture in the ETS has been postponed until 2015. According to MAF, if agriculture were to be included, the annual cost to the average dairy farm would be NZ \$3,900. However, key figures in the current government are now saying that inclusion of the agricultural sector will depend on international developments and whether or not cost effective mitigation solutions are available for farmers to use to reduce their emissions. (See NZ Dairy and Products Annual Report 2009 and NZ Dairy and Products Semi-Annual Report 2010 for information on the ETS.)

Another significant factor is water; both water quality and water access through storage and irrigation schemes. Nitrogen leaching into water systems from non-point sources (land based industries) is being touted as a leading cause of degradation to water quality in some regions of

New Zealand. There will likely be many initiatives to limit this and some may increase production costs and constrain production.

### **Organic Milk Production**

Less than 1% of milk produced in New Zealand is certified organic. However, according to Fonterra, organic milk production is expected to grow by 140% over the next five years.



## PSD Tables

Dairy, Milk, Fluid New Zealand	2009			2010			2011		
	Market Year Begin: Jan 2009			Market Year Begin: Jan 2010			Market Year Begin: Jan 2010		
(1000 Hd/ 1000 MT)	Official Data	Post Estimate	New Post Data	Official Data	Post Estimate	New Post Data	Official Data	Post Estimate	New Post Data
Cows In Milk	4365	4365	4597	4470	4470	4753			4850
Cows Milk Production	16601	16601	17397	16726	16726	16897			18642
Other Milk Production	0	0	0	0	0	0			0
Total Production	16601	16601	17397	16726	16726	16897			18642
Other Imports	2	2	2	2	2	2			2
Total Imports	2	2		2	2	2			2
Total Supply	16603	16603	17399	16728	16728	16899			18644
Other Exports	102	102	98	102	102	127			130
Total Exports	102	102	98	102	102	127			130
Fluid Use Dom. Consum.	331	331	331	340	340	340			340
Factory Use Consum.	16125	16125	16925	16241	16241	16387			18129
Feed Use Dom. Consum.	45	45	45	45	45	45			45
Total Dom. Consumption	16501	16501	17301	16626	16626	16772			18514
Total Distribution	16603	16603	17399	16728	16728	16899			18644
CY Imp. from U.S.	0	0	0	0	0	0	0	0	0
CY. Exp. to U.S.	0	0	0	0	0	0	0	0	0
TS=TD			0		0	0	0	0	0

Dairy, Butter New Zealand	2009			2010			2011		
	Market Year Begin: Jan 2009			Market Year Begin: Jan 2010			Market Year Begin: Jan 2010		
(1000 MT)	Official Data	Post Estimate	New Post Data	Official Data	Post Estimate	New Post Data	Official Data	Post Estimate	New Post Data
Beginning Stocks	70	70	80	73	75	56			40
Production	428	428	482	435	402	453			500
Other Imports	4	4	1	1	1	1			1
Total Imports	4	4	1	1	1	1			1
Total Supply	502	502	563	509	478	510			541
Other Exports	409	407	489	458	415	450			461
Total Exports	409	407	489	458	415	450			461
Domestic Cons.	20	20	18	23	23	20			20
Total Use	429	427	507	481	438	470			481
Ending Stocks	73	75	56	28	40	40			60
Total Distribution	502	502	563	509	478	510			541

CY Imp. from U.S.	0	1	0	0	0	0			
CY. Exp. to U.S.	30	30	37	27	40	35			35
TS=TD	0	0	0	0	0	0	0	0	0

Note: the Anhydrous Milk Fat Component of Exports has been adjusted to butter equiv. by multiplying by 1.22

Dairy, Cheese Zealand  (1000 MT)	2009 Market Year Begin: Jan 2009			2010 Market Year Begin: Jan 2010			2011 Market Year Begin: Jan 2011		
	Official Data	Post Estimate	New Post Data	Official Data	Post Estimate	New Post Data	Official Data	Post Estimate	New Post Data
Beginning Stocks	41	41	55	55	55	55			55
Production	300	300	308	265	244	303			313
Other Imports	4	4	6	5	5	6			6
Total Imports	4	4	6	5	5	6			6
Total Supply	345	345	369	325	304	364			374
Other Exports	270	270	290	276	225	285			295
Total Exports	270	270	290	276	225	285			295
Human Dom. Cons.	20	20	24	24	24	24			24
Other Use, Losses	0	0	0	0	0	0			0
Total Dom. Cons.	20	20	24	24	24	24			24
Total Use	290	290	314	300	249	309			319
Ending Stocks	55	55	55	25	55	55			55
Total Distribution	345	345	369	325	304	364			374
CY Imp. from U.S.	0	0	0	0	0	0			0
CY. Exp. to U.S.	28	0	17	2	2	7			10
TS=TD		0	0		0	0	0	0	0

Dairy, Milk, Non Fat Dry New Zealand  (1000 MT)	2009 Market Year Begin: Jan 2009			2010 Market Year Begin: Jan 2010			2011 Market Year Begin: Jan 2011		
	Official Data	Post Estimate	New Post Data	Official Data	Post Estimate	New Post Data	Official Data	Post Estimate	New Post Data
Beginning Stocks	34	34	70	85	85	50			50
Production	361	361	385	365	365	355			400
Other Imports	1	1	4	4	4	2			2
Total Imports	1	1	4	4	4	2			2
Total Supply	396	396	459	454	454	407			452
Other Exports	310	310	408	400	400	355			400
Total Exports	310	310	408	400	400	355			400
Human Dom. Cons.	1	1	1	4	4	2			2
Other Use, Losses	0	0	0	0	0	0			
Total Dom. Cons.	1	1	1	4	4	2			2

Total Use	311	311	409	404	404	357			402
Ending Stocks	85	85	50	50	50	50			50
Total Distribution	396	396	459	454	454	407			452
CY Imp. from U.S.	0	0	0	0	0	0			0
CY. Exp. to U.S.	0	0	0	0	0	0			0
TS=TD			0		0	0		0	0

Dairy, Dry Whole Milk Powder New Zealand  (1000 MT)	2009			2010			2011		
	Market Year Begin: Jan 2009			Market Year Begin: Jan 2010			Market Year Begin: Jan 2011		
	Official Data	Post Estimate	New Post Data	Official Data	Post Estimate	New Post Data	Official Data	Post Estimate	New Post Data
Beginning Stocks	70	70	150	160	160	100			60
Production	754	754	768	760	750	830			900
Other Imports	1	1	1	0	0	1			1
Total Imports	1	1	1	0	0	1			1
Total Supply	825	825	919	920	910	931			961
Other Exports	664	664	818	894	809	870			885
Total Exports	664	664	818	894	809	870			885
Human Dom. Cons.	1	1	1	1	1	1			1
Other Use, Losses	0	0	0	0	0				0
Total Dom. Cons.	1	1	1	1	1	1			1
Total Use	665	665	819	895	810	871			886
Ending Stocks	160	160	100	25	100	60			75
Total Distribution	825	825	919	920	910	931			961
CY Imp. from U.S.	0	0	0	0	0				0
CY. Exp. to U.S.	2	2	3	2	2	1			1
TS=TD		0	0		0	0		0	0

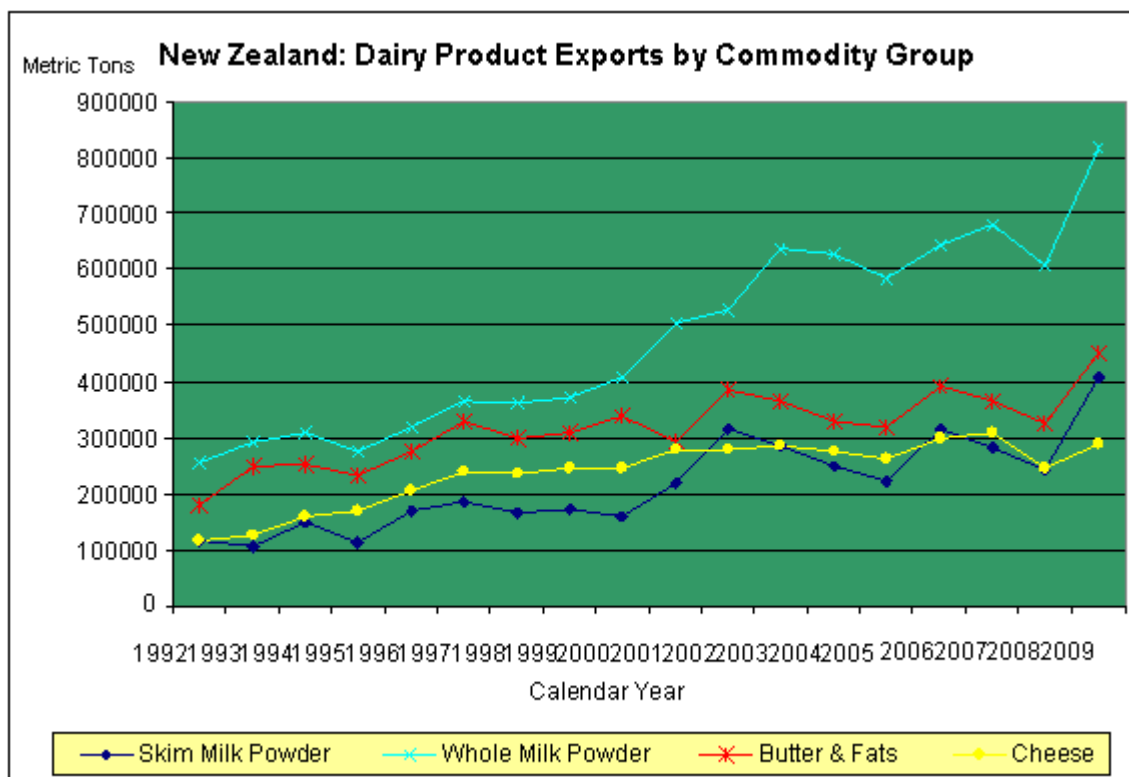
Note: Data included in this report is not official USDA data. Official data can be found at <http://www.fas.usda.gov/psd>

## Production by Commodity

Production of whole milk powder (WMP), butter and fats, skim milk powder (SMP), and cheese in MY2010 is estimated at 1.94 million tons, just 2,000 tons less than MY2009 production. The MY2011 production estimate for these same commodities is forecast that 2.11 million tons.

As official production data does not exist in New Zealand, long-term production trends for the main commodities can be estimated by using exports as a proxy. (Approximately 95% of New Zealand's dairy production is exported.) Over the last two decades, total dairy exports have been increasing at a trend rate of 5.5% to 6% per annum. In contrast, the long-term trend for milk solids production at the farm gate has been increasing at approximately 4.5% per annum. The difference can be explained by manufacturing efficiencies and new product development.

Using exports as a proxy, total production of the main four commodities (WMP, butter/fats, SMP and cheese) has been increasing each year at a rate of approximately 5% to 5.5%. WMP production has been increasing at 6.5-7% per annum, as has SMP production, but from a much lower base. The trend in cheese production is on the order of 4.5% to 5% per annum while butter/fat production has lagged behind at a growth trend of approximately 3.5%.



Source: Global Trade Atlas

### Whole Milk Powder (WMP) MY2010

MY2010 production is forecast at 830,000 tons, an 8% increase over the previous year, which is slightly higher than the long-term per annum increase of between 6.5% and 7%. The trade statistics for this year indicate that, over and above an estimated inventory run down in MY2010, there has been a production increase which Post anticipates will be sustained through to the end of the year.

Long-term factors driving WMP production include:

- Relative profitability, which tends to be better for WMP than for other commodity products;
- Nearly all the processing capacity built over the last decade has been powder driers;
- Dehydrating is the cheapest way to process liquid milk into a more non-perishable form;
- New Zealand's isolation and distance from markets means shipping water filled products is very costly; and,
- Ability to produce to customer specifications.

## **MY2011**

Production in MY2011 is forecast to jump another 8% bringing total production to 900,000 tons.

## **Butter and Other Fats**

### **MY2010**

Butter production is forecast at 453,000 tons, a reduction of 8% from the previous year. Relative export pricing has historically favored protein production over fat production. However, the picture changed in 2008 and 2009, which drove an increase in butter and fat production in MY2009. The latest trade statistics indicate this trend may have come to an end suggesting a reduction in production this year.

### **MY2011**

Production in MY2011 is forecast to increase on the order of 10% bringing total production to an estimated 500,000 tons. According to various reports, fat inventories around the world are low (which could be a function of increased demand by food manufacturers as a result of higher vegetable oil prices). Over the past few months, the price of AMF has increased significantly in Fonterra's Global Dairy Trade auctions. If sustained, the increase in the price of butter/fats will be a factor influencing MY2011 production.

## **Skim Milk Powder**

### **MY2010**

SMP production is forecast to fall to 355,000 tons, an 8% drop, which reflects the decline in butter/fat production. (In most manufacturing situations, SMP is a co-product of butter or AMF production.)

### **MY2011**

SMP production is forecast to track the increase in butter/fat production, jumping 13% to reach 400,000 tons.

## **Cheese**

### **MY2010**

Based on year-to-date export data, cheese production is forecast to remain fairly stable falling 1.5% in MY2010 to 303,000 tons.

### **MY2011**

Production is forecast to increase to 313,000 tons in MY2011, a 3% increase over the previous year. The forecast reflects the anticipated increase in milk supply and the traditional product mix of exports. In New Zealand, cheese plants are useful outlets for managing milk supply during peak periods.

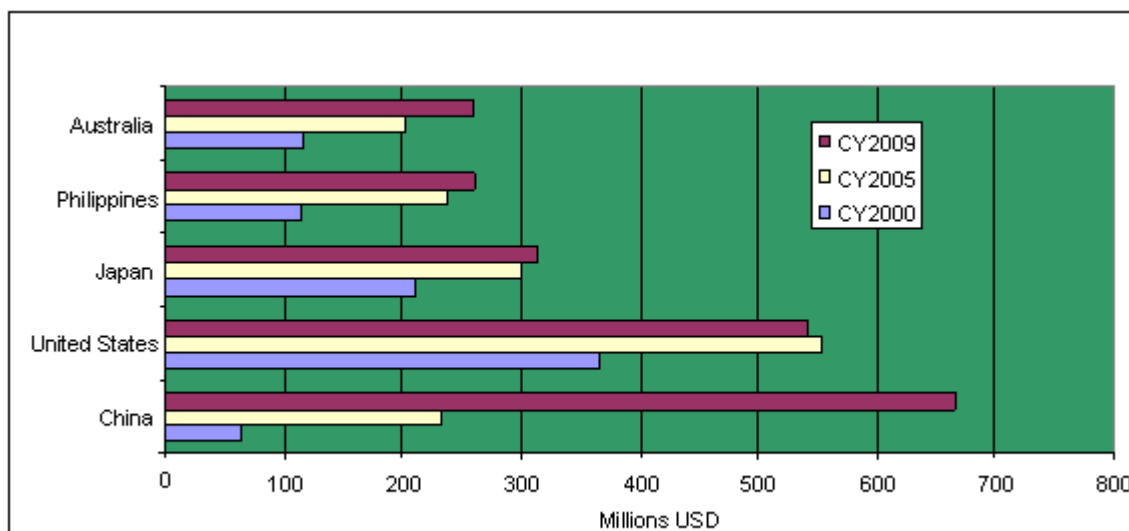
## **Other Products**

Whey, casein, lactose, and consumer-ready products (liquid milk, cream, and yoghurt) made up 16% of total exports in 2009. This product category has been growing at approximately 7.5% to 8% per annum.

## Exports

Dairy product exports are a significant part of New Zealand's total merchandise exports comprising between 22% and 25% of total exports over the last three years. At 1,463,712 tons, total dairy exports to date (January – August) are down 2.4% compared to the same period last year. The exceptions are WMP, up 14%, and liquid milk, up 34%. On a value basis, exports are up 40% in US dollar terms.

### New Zealand: Growth in Dairy Exports to Top Five Markets



Source: Global Trade Atlas

New Zealand Dairy Product Exports to Top Five Markets (CY2009/Metric Tons)					
	China	USA	Japan	Philippines	Australia
Liquid Milk (T)	5,585	582	1,584	31,537	4,470
SMP	50,199	178	7,686	42,208	5,935
WMP	171,491	3,233	15	20,692	7,615
Consumer Products	3,874	81	3,777	14,509	3,384
MPC	1,715	41,850	2,407	443	1,249
Butter & Fats	26,720	31,496	136	12,584	16,490
Cheese	9,222	17,465	46,325	11,446	52,349
Casein	3,199	32,022	9,965	1,593	1,209
Whey Products	8,889	6,674	4,852	462	2,352
Other Products incl Lactose	4,103	99	3,489	1	4,420
Total Volume	284,997	133,680	80,236	135,475	99,473
Total Value in USD	\$667,100,797	\$541,790,684	\$315,095,640	\$260,750,577	\$259,414,036
Price per Metric Ton in USD	\$2,341	\$4,053	\$3,927	\$1,925	\$2,608

Source: Global Trade Atlas

### Whole Milk Powder

## **MY2010**

The monthly trend for the year-to-date suggests that WMP exports could finish the year 70,000 tons ahead of last year. However, it is likely that a draw down of stocks during the first quarter contributed to a boost in shipments and that ongoing production for the year won't support such an increase in export volumes. Exports are forecast to be up by 52,000 tons, or 6.5%, reaching a total of 870,000 tons.

## **MY2011**

While production of WMP in MY2011 is expected to increase by 8%, exports are forecast to increase by a more moderate 2% reaching 885,000 tons. This is a result of a small rebuilding of stocks (15,000 tons) following the rundown of stocks in 2010.

## **Butter and Other Fats**

### **MY2010**

Post anticipates a drop in butter (AMF is adjusted to a butter equivalent) exports on the order of 39,000 tons, or 8%, even though stocks on hand are likely to be reduced by 16,000 tons by the end of the year.

### **MY2011**

The increase in production is expected to translate into an 11,000 ton uptick in exports, or 2%, reaching 461,000 tons. In addition, it is expected stocks on hand will increase by 20,000 tons during the year.

## **Skim Milk Powder**

### **MY2010**

Along with the reduction in butter exports in MY2010, SMP exports are forecast to fall by 13% to 355,000 tons.

### **MY2011**

SMP exports are forecast to bounce back in MY2011 jumping 13% to reach 400,000 tons again tracking butter/AMF. Stock levels are expected to remain stable.

## **Cheese**

### **MY2010**

Cheese exports are forecast to be fairly stable at 285,000 tons, which is a decline of 1.7% from the previous year.

### **MY2011**

Exports are forecast to increase slightly (+3.5%) in MY2011 to 295,000 tons. This forecast assumes a small increase in exports to the US market and continued demand for cheese from other markets.

## **United States**

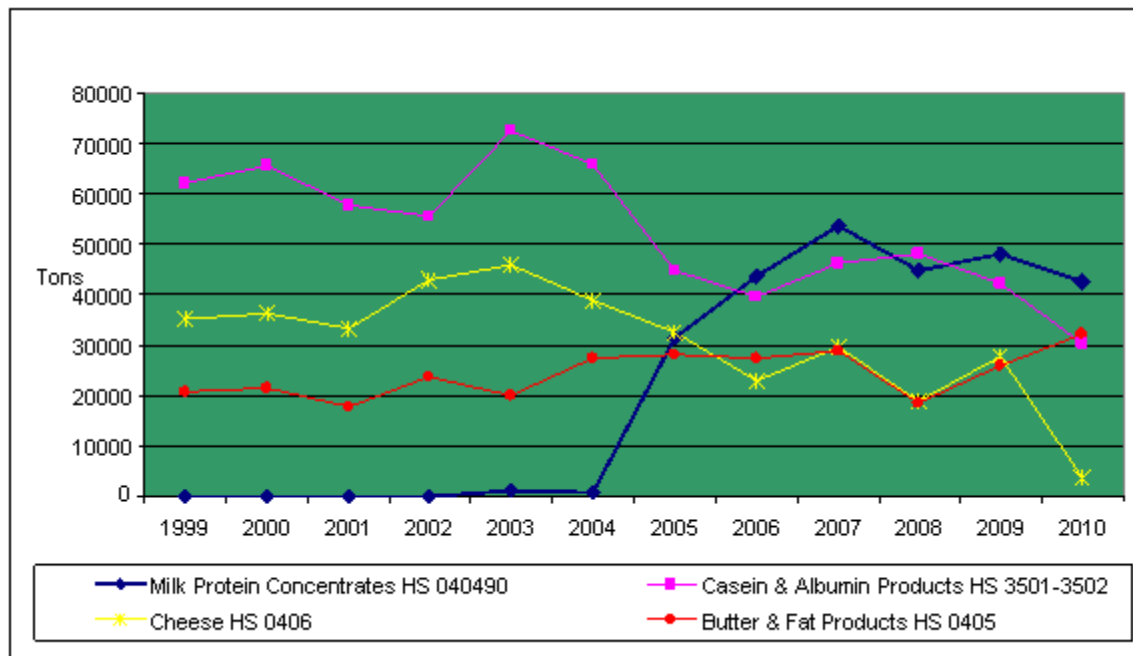


On a value basis, the United States is the second largest market for New Zealand dairy products after China accounting for approximately 10% of total exports. (China surpassed the United States as the number one market in MY2009.)

New Zealand dairy product exports to the US market were valued at US \$541.8 million in MY2009. In volume terms, New Zealand exported 133,680 tons of product to the United States, or 5.7% of the total volume of dairy products shipped.

For the year to date (Jan-Aug), US \$329.8 million of product has been shipped to the US market, or 6.5% of total exports. Leading exports to the US market are milk protein concentrate, butter/fat, casein and cheese. However, New Zealand cheese exports to the United States have dropped significantly, due largely to low domestic cheese prices.

### New Zealand Dairy Product Exports to the United States by HS Code



Source: GTA

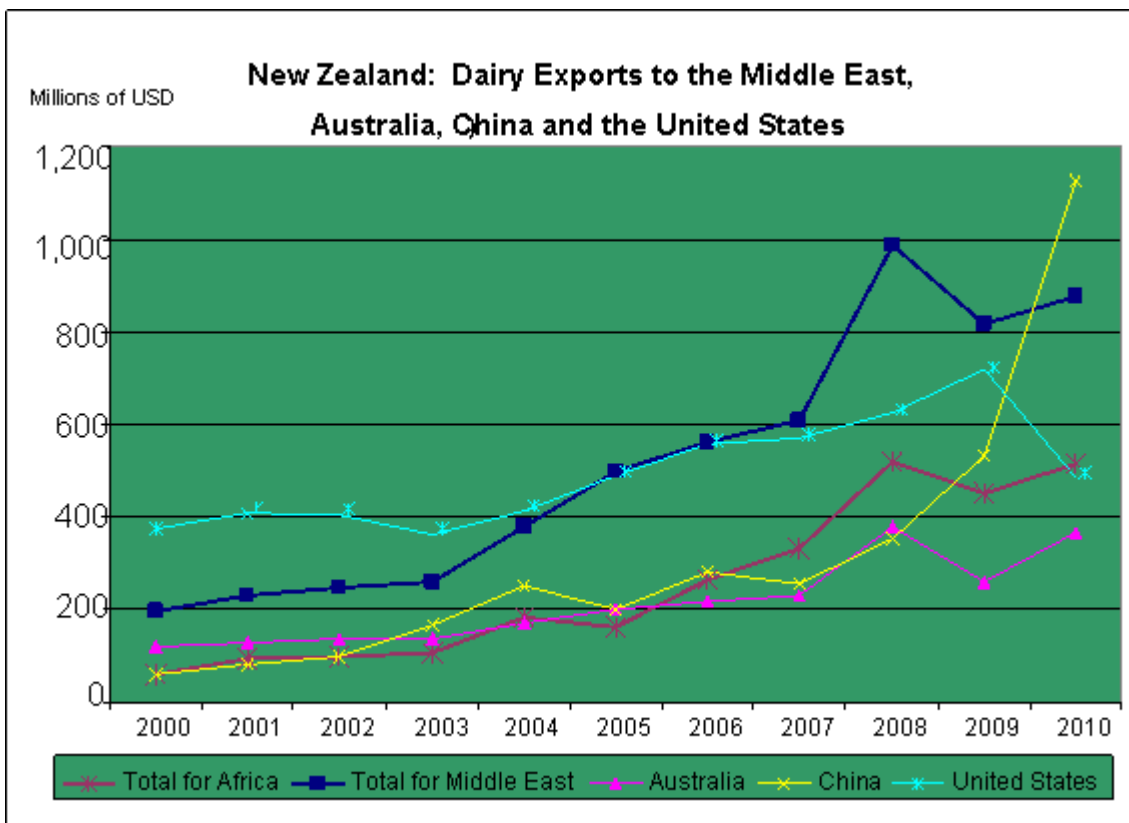
Note: May 31 year used for export data.

### Middle East/Africa

It's worth noting the increase in the value of New Zealand dairy exports to the Middle East and Africa over the last decade. While the USD value of exports to China, New Zealand's largest market, have been growing at an annual growth rate of 28% over the last decade, exports to the Middle East, have been trending up by 18% to 19% per annum. In the case of Africa, the upward trend has been approximately 25% per annum. By way of comparison, New Zealand exports to

the U.S. market have been growing in value at a trend rate of 5.5% to 6% per annum over the last decade. In the case of Australia, New Zealand’s fifth largest market, the growth rate is on the order of 12% to 13% per annum.

While some New Zealand milk processing companies that have exported to the Middle East and Africa in the past have reportedly pulled back to concentrate on opportunities in other countries, Fonterra has further developed its infrastructure and strengthened its marketing push in the Middle East and northern Africa, both in terms of its commodity trade and branded products. Fonterra markets jar cheese in Iraq, milk powder to Somalia, and tinned butter and milk to various Middle Eastern countries. Although coming off very low bases, sales of the consumer ready products are reportedly growing at 50% to 100% per annum.



Source: GTA

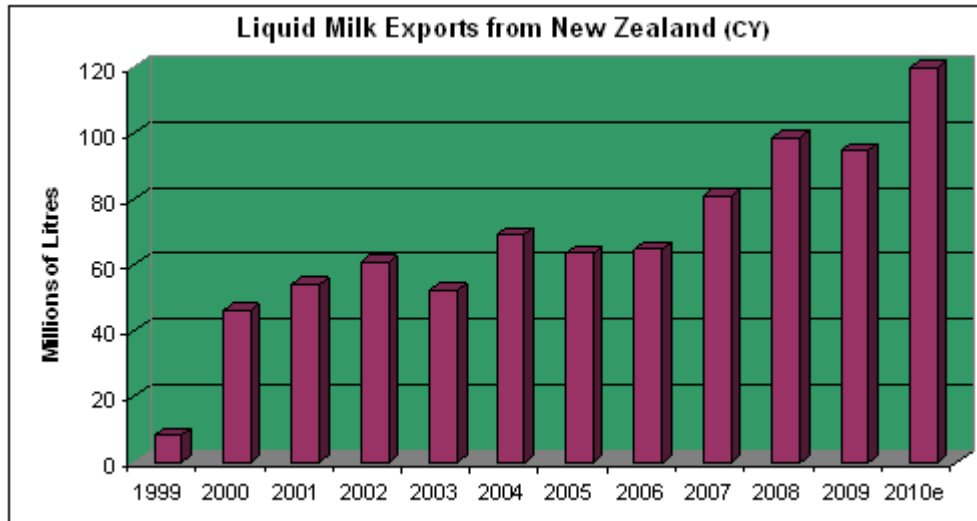
Note: August year for export data.

### UHT Liquid Milk Production/Exports

From 1999 to 2010, New Zealand’s liquid milk exports have trended upward at a rate of approximately 16% per annum. This is close to four times the trend for total dairy exports. In the near future, NZ Dairy Processing Ltd., a new company, will reportedly begin to process and export approximately 35 million liters of UHT milk over the next twelve months. The milk will be sourced from Fonterra under the regulated milk provisions.

Fonterra has increased capacity at its main UHT plant by 600,000 packs per week which could push up its total capacity by as much as 20%.

The Pacific Islands and Southeast Asia are the main destinations with the Philippines standing out as by far the most significant destination followed by Vietnam Singapore, China/Hong Kong and Taiwan.



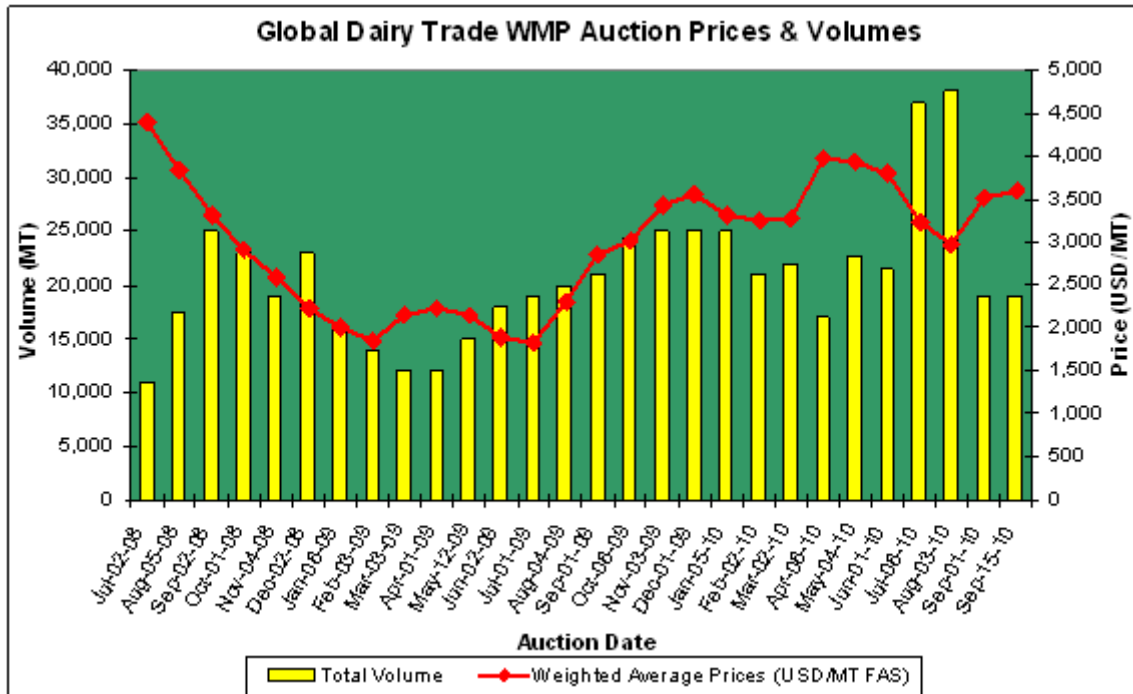
Source: GTA and Post Estimates

## Marketing

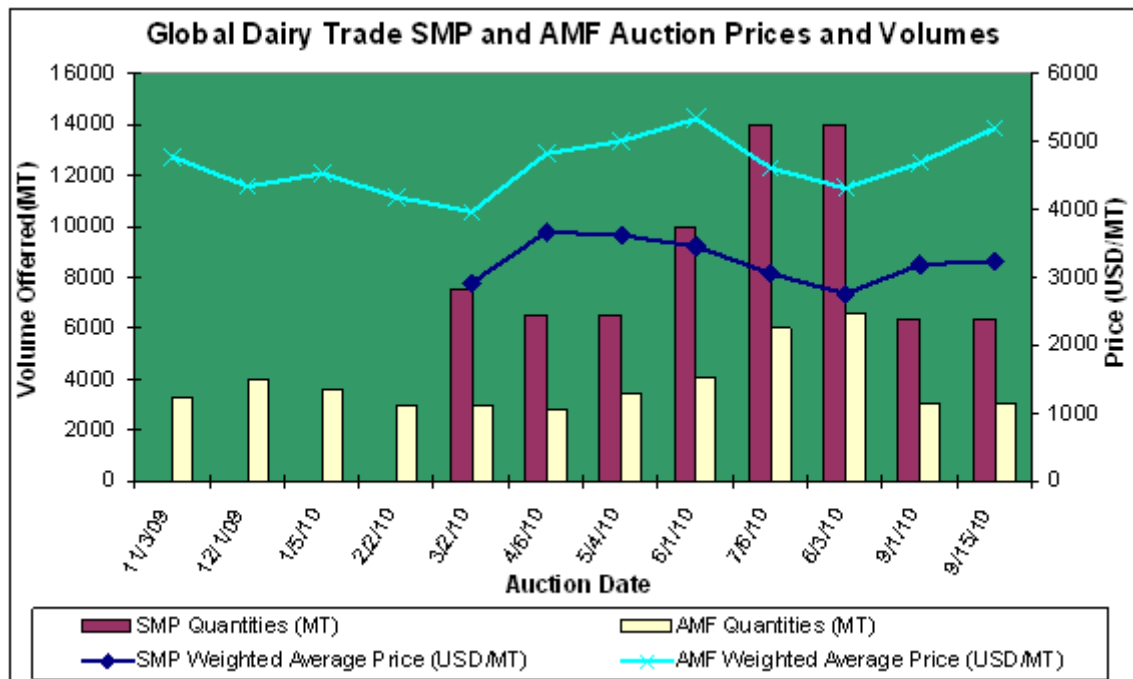
### Global Dairy Trade – the Fonterra Commodity Auction

Fonterra’s internet-based dairy auction is now being held twice a month. Product sold through the auction platform is sourced in New Zealand and Australia. In 2009, approximately 10% of New Zealand’s total dairy exports were sold through the auction. More information can be found at:

<http://www.globaldairytrade.info/DesktopDefault.aspx?tabid=417>



Source: GDT



Source: GDT

### NZ Signs a Dairy Cooperation Agreement with China

In March 2010, the New Zealand Agriculture and Forestry Minister David Carter signed a Dairy Cooperation Arrangement with China's Agriculture Minister Han Changfu. Agricultural development and food safety are key areas of interest.

## Trade and Government Policy

### Primary Growth Partnership (PGP)

The PGP is a new innovation and research funding vehicle for the primary, forestry and food sectors. It is intended to produce step change innovations to bring about substantial and sustainable economic growth. The New Zealand Government has set aside NZ \$90 million of funding for the first four years of the program, then NZ \$70 million annually from 2014.

A consortium that includes Fonterra, Dairy New Zealand, LIC, Synlait, LandCorp, Young Farmers of NZ, Agricultural Services Ltd, and Zespri (the kiwifruit cooperative) has obtained NZ \$84.6 million of funding under the program for a seven-year project. The consortium will contribute an additional NZ \$85.4 million toward the project. Information can be found at:

<http://www.maf.govt.nz/pgp/media-bkqrd-dairy.pdf>

### Overview of Processing Capacity

For the milk supply season ending on May 31, 2010, Fonterra collected 1,286 million kilograms of milk solids out of a nationwide total of 1,435 million kilograms putting Fonterra's share of the total supply base at 89.6%, down from 91.8% the previous year. Since commissioning its new drier at the Edendale factory in Southland in 2009, Fonterra announced that it will build a new factory near Darfield in Canterbury on the South Island. This factory will reportedly process 600 million liters of milk per year (52 million kilograms of milk solids). Synlait has commenced building a second powder/drier plant and also plans to build an infant formula factory.

Of the major processors in New Zealand, only the three cooperatives are totally owned by New Zealand entities. The remaining processors all, to varying degrees, have off-shore ownership.

Synlait announced in July 2010 that Bright Dairy and Food Company, which is based in China, purchased a 51% share in the processing side of the business.

New Zealand: Overview of Dairy Processors (other than Fonterra)						
Company Name	Date Established	Company Type	Forecast Total Milk Processed	Forecast Milk Accessed	Estimated Milk Processed	Product Focus

			2010/11 Season 1/ Season	under DIRA 2010/11 Season	2012/13 Season	
			Millions of kilograms of milk solids			
<b>North Island</b>						
Tatua	1919	Cooperative	16.5	4.3	17.5	Caseinates, AMF, Specialty Products
Goodman Fielder		Corporate	24	24	24	Yogurt and Fluid Milk
Open Country Dairy	2007	Corporate	55	4.3	58	Cheese, Whey (low protein), WMP, SMP, AMF
NZ Dairy Processing Ltd	2010	Corporate	3	3	3	UHT liquid milk
Miraka Milk	Started construction	Corporate/Iwi	0	0	17	WMP/SMP AMF
Arapuni Milk Coy	In process of raising capital, consents granted	Corporate	0	0	17	WMP
Dairyland	In planning stage	Corporate	0	0	25	WMP/SMP AMF
Estimated N.I.			98.5	35.6	161.5	
<b>South Island</b>						
Westland Milk Products	1937	Cooperative	52	4.3	54	Milk Powder, Butter, AMF, Caseins, Caseinates etc.
Open Country Dairy	2007	Corporate	23	0	25	Whey (low protein), WMP, SMP, AMF
NZ Dairies	2007	Corporate	18	3	18	WMP and Child Nutrition Products
Synlait	2008	Corporate	25	4.3	40	WMP, AMF, SMP, Enfant formula & Nutritional Products
Cadbury		Corporate	2.2	2.2	2.2	Confectionary
Mataura Valley Milk	In process of raising capital	Corporate	0	0	17	WMP
Oceania Milk	In process of raising capital	Corporate	0	0	17	WMP
Estimated S.I.			120.2	13.8	173.2	
Other Small Processors			3	3	3	Various, artisan cheeses etc
Total NZ			221.7	52.4	337.7	

Sources: Press reports; Agricultural Affairs Office estimates

1/ Includes milk obtained from Fonterra under the Dairy Industry Restructuring Act. Terms for Goodman Fielder are different from those of other companies.

Note: To convert from millions of kilograms of milk solids to liters, multiply by 11.5

## **Other Issues**

### **Fonterra Capital Restructuring - Trading Amongst Farmers (TAF)**

In June 2010, Fonterra shareholders (farmer owners) voted to approve the third stage of capital restructuring – a share trading system among farmers. The proposal had overwhelming support among Fonterra’s farmer shareholders with a 90% approval rate among the nearly 79% of shareholders that voted. Fonterra is now working through the mechanics of actually getting the market up and running and has said it expects it to be in place by late 2011. TAF will require legislative changes to the Dairy Industry Restructuring Act.

### **NZX WMP Futures Market**

NZX, the New Zealand stock exchange, began offering futures contracts for whole milk powder in early October 2010, and had its first trade on October 12. Ten tons of whole milk powder traded at a listing price of US \$3,525 per ton.

Under the system, contract periods range from one to 18 months, with buyers and sellers trading through a clearing house. Traders are primarily expected to be global dairy processors or purchasers that use the futures contracts as a means to minimize the risk associated with price volatility. The futures contracts are settled in cash, rather than in product, with Fonterra’s online auction Global Dairy Trade acting as the reference price.

The suitability of GDT as a reference price has been controversial and Open Country Dairy, a Fonterra competitor, filed a complaint with the Securities Commission. Open Country Dairy was concerned that Fonterra could use its control and ownership of GDT to manipulate the market. However, after reviewing the submission, the Security Commission announced that it was confident the rules governing trade of the dairy futures product would restrict the ability of any player to take positions that could threaten the integrity of the market.