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#### **Foreword**

This is already the twelfth annual report of the LTO International Milk Price Comparison with the milk prices for the calendar year 2011. My thanks go to all who contributed to this comparison of the prices farmers are paid for their milk. It is the result of successful cooperation between LTO Netherlands, European Dairy Farmers and the Dutch Dairy Board. Furthermore, it was decided recently that this cooperation should continue for the next four years.

The year 2011 will be remembered as an exceptionally good and rewarding dairy year. The average milk price of € 35.04 was the highest paid in the history of this comparative exercise. An 11% increase compared to 2010 restored the effects of the deep price trough of 2009. What is clearly visible is that the influence of market forces results in greater volatility in milk prices paid than previously when the EU milk policy had more decisive influence. That we have noticed again in the first months of 2012. The global rise in dairy prices in 2010 and 2011, combined with good weather in many regions, made for increased milk production in a period when consumption grow stagnated. As a result, the milk prices paid are under pressure in 2012.

The top five ranking companies remained unchanged compared to last year. This applies also to the enviable position of the Dutch dairy companies in third and fourth place. I think this indicates that well organized and efficient processing of milk make a good strategy. The influence of this splendid dairy year 2011 casts its shadow on the phasing out of milk quotas in the EU in view of their elimination in 2015. Several dairy companies will merge or progress to a greater or lesser degree of cooperation. I wonder what changes this will bring with it and look forward to the next edition of this dairy publication.

#### Kees Romijn

Chairman Dairy Committee Dutch Federation of Agriculture and Horticulture LTO Nederland

#### 1. Introduction and notes for readers

#### 1.1 Introduction

The LTO-International Milk Price Comparison is published every month at the request of the Dairy Committee of the Dutch Federation of Agriculture and Horticulture (LTO Nederland) at www.milkprices.nl. This is a comparison of prices paid for milk by large European companies and is done in co-operation with European Dairy Farmers (EDF). EDF collects the milk price data and makes them available. Calculations are undertaken by the Dutch Dairy Board (Productschap Zuivel, PZ).

The method chosen for the calculations shows the price a dairy farmer would receive if milk of specific (standard) composition, quality and quantity were delivered to the different dairy companies.

In this report the following characteristics of the standard milk are taken as a basis:

- 4.2% fat;
- 3.4% protein;
- total bacterial count 24,999 per ml;
- somatic cell count 249,999 per ml;
- annual delivery 500,000 kg.

The prices are exclusive of VAT, ex-farm and inclusive of supplementary payments.

It must be emphasized that there is no comparison of the average milk prices paid. The average price paid by a dairy company for milk is dependent on the actual composition, quality, quantity et cetera of the milk delivered. Furthermore, no conclusions can be drawn about the performance of dairy companies on the basis of the milk prices paid. Many more factors play a role in assessing performance.

After each calendar year has ended, a report is presented with the calculated milk prices paid for that year. This annual report appears when the supplementary payments of the preceding calendar/ financial year are known and can, thus, be incorporated into the milk prices. The present publication comprises the milk prices calculated for the calendar year 2011.

#### 1.2 Notes for readers

Chapter 2 features the calculated milk prices for 2011 (paragraph 2.1), followed by a short analysis (paragraph 2.2.), a description of the developments in the dairy market (2.3) and latest trends of milk prices in 2012 (paragraph 2.4). In paragraph 2.5 an analyse is made to look for a possible milk pricing cycle.

Chapter 3 describes some interesting developments in milk pricing systems.

Chapter 4 starts with the Top 20 of world's largest dairy companies followed by an explanation of the calculated milk price per company (4.1) including Swiss company Emmi (4.2) and the development of milk prices in New Zealand and the United States (4.3).

In the appendices certain basic data can be found about the dairy companies (Annex 1), milk prices per dairy company from 1999 to 2011 (Annex 2) ,the average currency exchange rates in 2011 and 2010 (Annex 3) and the milk prices in the U.S. and New Zealand in national currency (Annex 4).

# 2. Milk prices in 2011

# 2.1 Milk price comparison

The calculated milk prices of the 17 European dairy companies increased considerably in 2011, continuing the sharp rise in 2010. Prices rose by 11.4% over those in 2010, to an average € 35.04 per 100 kg. Thus milk prices have reached the highest level since the start of the milk price comparison in 1999 and the previous record price of milk in 2008 (average € 34.96) has been exceeded.

Table 1. Milk prices 2011 and 2010
In € per 100 kg of standard milk (excluding VAT and including supplementary payments)

	2011		2010		2011-2010	2011/2010	national
EI		1		1	1		currency
		_					
				-			
		_					
		1 -		_			0.50/
		_					8.5%
DE	35.04	6	30.79	11	4.25	13.8%	
FR	34.55	7	32.20	6	2.36	7.3%	
FR	34.34	8	31.71	9	2.63	8.3%	
FR	34.34	9	31.81	8	2.53	8.0%	
BE	34.18	10	31.96	7	2.22	6.9%	
FR	34.17	11	31.65	10	2.53	8.0%	
ΙE	34.14	12	29.72	14	4.42	14.9%	
DE	34.08	13	30.02	13	4.06	13.5%	
DE	33.75	14	30.39	12	3.37	11.1%	
ΙE	33.61	15	29.00	15	4.60	15.9%	
UK	31.76	16	28.75	16	3.02	10.5%	11.9%
UK	28.83	17	25.26	17	3.58	14.2%	15.6%
	35.04		31.47		3.57	11.3%	
NZ	30.12		30.37		-0.25	-0.8%	-4.8%
US	32.70		27.23		5.46	20.1%	25.1%
СН	48.90						
	FR FR BE FR IE DE IE UK UK	IT 40.40 NL 37.15 NL 36.86 DK 35.13 DE 35.04 FR 34.55 FR 34.34 FR 34.17 IE 34.14 DE 34.08 DE 33.75 IE 33.61 UK 31.76 UK 28.83  NZ 30.12 US 32.70	FI 43.28 1 IT 40.40 2 NL 37.15 3 NL 36.86 4 DK 35.13 5 DE 35.04 6 FR 34.55 7 FR 34.34 8 FR 34.34 9 BE 34.18 10 FR 34.17 11 IE 34.14 12 DE 34.08 13 DE 33.75 14 IE 33.61 15 UK 31.76 16 UK 28.83 17   NZ 30.12 US 32.70	FI       43.28       1       39.22         IT       40.40       2       34.92         NL       37.15       3       32.82         NL       36.86       4       32.41         DK       35.13       5       32.38         DE       35.04       6       30.79         FR       34.55       7       32.20         FR       34.34       8       31.71         FR       34.34       9       31.81         BE       34.18       10       31.96         FR       34.17       11       31.65         IE       34.14       12       29.72         DE       34.08       13       30.02         DE       33.75       14       30.39         IE       33.61       15       29.00         UK       31.76       16       28.75         UK       28.83       17       25.26         35.04       30.37         US       32.70       27.23	FI       43.28       1       39.22       1         IT       40.40       2       34.92       2         NL       37.15       3       32.82       3         NL       36.86       4       32.41       4         DK       35.13       5       32.38       5         DE       35.04       6       30.79       11         FR       34.55       7       32.20       6         FR       34.34       8       31.71       9         FR       34.34       9       31.81       8         BE       34.18       10       31.96       7         FR       34.17       11       31.65       10         IE       34.08       13       30.02       13         DE       34.08       13       30.39       12         IE       33.61       15       29.00       15         UK       31.76       16       28.75       16         UK       28.83       17       25.26       17         35.04       30.37       27.23	FI       43.28       1       39.22       1       4.06         IT       40.40       2       34.92       2       5.48         NL       37.15       3       32.82       3       4.33         NL       36.86       4       32.41       4       4.45         DK       35.13       5       32.38       5       2.75         DE       35.04       6       30.79       11       4.25         FR       34.55       7       32.20       6       2.36         FR       34.34       8       31.71       9       2.63         FR       34.34       9       31.81       8       2.53         BE       34.18       10       31.96       7       2.22         FR       34.17       11       31.65       10       2.53         IE       34.08       13       30.02       13       4.06         DE       34.08       13       30.39       12       3.37         IE       33.61       15       29.00       15       4.60         UK       31.76       16       28.75       16       3.02         UK	FI         43.28         1         39.22         1         4.06         10.4%           IT         40.40         2         34.92         2         5.48         15.7%           NL         37.15         3         32.82         3         4.33         13.2%           NL         36.86         4         32.41         4         4.45         13.7%           DK         35.13         5         32.38         5         2.75         8.5%           DE         35.04         6         30.79         11         4.25         13.8%           FR         34.55         7         32.20         6         2.36         7.3%           FR         34.34         8         31.71         9         2.63         8.3%           FR         34.34         9         31.81         8         2.53         8.0%           BE         34.18         10         31.96         7         2.22         6.9%           FR         34.17         11         31.65         10         2.53         8.0%           IE         34.08         13         30.02         13         4.06         13.5%           DE

The milk price of Hämeenlinnan Osuusmeijeri published for 2010 is corrected form € 39.07 to € 39.22. Fonterra's 2010 milk price is corrected from € 30.05 to € 30.37 based on the published definitive price for the 2011/12 season.

Interestingly, the top 5 dairy companies in 2011 are in exactly the same positions in the ranking as last year. As usual, the highest milk price was paid by the Finnish Hämeenlinnan Osuusmeijeri, followed by the Italian Granarolo. The Dutch dairy cooperatives Friesland Campina and DOC Kaas have maintained their high position in the rankings in 2011, whereby the difference from the number five, Arla Foods (Denmark), clearly increased.

The largest increase in 2011 was for Alois Müller. The milk price of this German company rose from the 11th position in 2010 to 6th place in 2011. Both in 2010 and 2011 the milk price of the German dairies - except Nordmilch in 2011 – and the Irish dairies increased significantly more than average, while the rise of French milk prices was clearly behind in both years. The French dairy companies are thus in the middle of the rankings once again.

Although milk prices in the UK are also breaking records, the position of UK companies in the milk price comparison has not improved and they still bring up the rear.

The calculated milk prices in the United States in 2011 - expressed in dollars - increased by up to 25.1%, and this after an increase of 29.3% in 2010.

Fonterra's milk price dropped somewhat, but still remains at an exceptionally high level by New Zealand standards.

For the first time in the LTO International Milk Price Comparison the milk price of the Swiss dairy Emmi has been calculated. This price of € 48.90 in 2011 is significantly higher than those of other European companies. Emmi's milk price also soared in 2011.

Figure 1 shows that after the fall in prices in 2009, in 2011, the advance in milk prices experienced in the previous year has continued briskly and this has resulted in a record average milk price of € 35.04 per 100 kg in 2011.

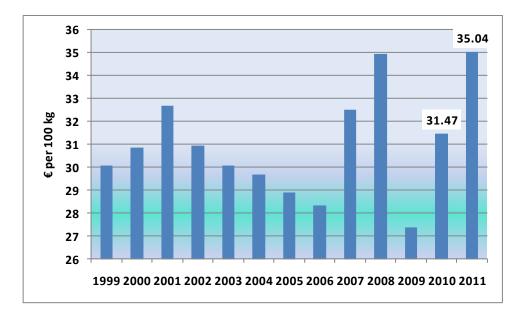


Figure 1. Average milk prices from 1999 to 2011

Figure 1 also shows that since the increase in influence of the market since 2007, milk prices not only fluctuate much more, but on average are at a higher level.

The average milk price of the last 5 years (2007 - 2011) was € 32.28 per 100 kg and was therefore 9% higher than the average of the previous 5 years (2002 - 2006) when the EU price support was slowly being reduced.

## 2.2 Milk prices 2011

The milk price of the relatively small Finnish cooperative **Hämeenlinnan Osuusmeijeri** is included in the milk price comparison as an alternative to the much larger Valio. Both paid the second highest milk price in their history<sup>1</sup> in 2011. The price of milk of both Finnish cooperatives was only higher in 2008.

Valio's high milk price is due to relatively high added value products and the favourable trend in exports to Russia. On the Finnish domestic market the prices are under pressure owing to increased imports from Sweden. Hämeenlinnan Osuusmeijeri which sells all its milk through Arla Ingman, the Finnish subsidiary of Arla, is more dependent on the Finnish market than Valio.

No country turns as much milk into cheese as Italy. For this reason less on-farm milk is available for other outlets which causes considerable imports and relatively high milk prices as a result as shown by **Granarolo**'s milk price.

<sup>&</sup>lt;sup>1</sup>According to Valio's 2011 Annual Report the milk price paid in 2011 was 44.1 cents per litre, or 3.2 cents more than in 2010, and the second highest price paid in the firm's history

The milk price paid by Friesland Campina in 2011 was the highest ever paid in the history of the firm and its predecessors. This Dutch dairy cooperative had disappointing results on the European consumer market but, through its broad portfolio of products and the wide geographical spread of its activities, these results were compensated by good sales of dairy ingredients and in consumer markets outside Europe. DOC Kaas again achieved a high milk price in 2011, obtaining good selling prices of their main products, cheese, whey and cream. The positive development of profits from cheese is partly a consequence of substantial imports by Russia.

The Danish milk price of **Arla Foods** rose less than average in 2011 in comparison with other dairy companies. This may reflect problems in the European market. An effect of the economic crisis was that consumers bought more from cheaper supermarkets and fewer branded products. Arla is dependent on Europe for 80% of its turnover.

The year 2011 was also no record year for **French** milk prices. As a result of the French system, using national recommendations, milk prices rose relatively less in 2011 than elsewhere in Europe.

Among the German dairy companies **Alois Müller's** calculated milk price is clearly higher than that of the DMK<sup>2</sup> cooperatives **Humana** and **Nordmilch**. Nevertheless, the Nordmilch milk price was at its highest since 1999 at least. DMK aims to pay its German farmer members a milk price which is higher than the average. For this purpose, additional investments will be made in emerging markets outside Europe. In the European milk price comparison the prices of both of the DMK cooperatives so far are generally below the average.

The Belgian Milcobel scores less well in the milk price comparison than last year. Milcobel encountered some problems in cheese production and disappointing income from ice cream due to the poor summer.

The milk price of Irish companies **Glanbia** and **Kerry** rose substantially more than the average for the second consecutive year but, nonetheless, their position remains low in the rankings. However, the gap between them and the French and German companies has been further reduced.

UK milk prices have improved strongly but this has not affected their position in the rankings. Dairy Crest and First Milk are at the bottom of the European rankings, as in most other years.

#### 2.3 Dairy markets in 2011

Though 2010 was already a good dairy year, 2011 has surpassed it. Production conditions have been good and milk production increased worldwide, however this increase could be absorbed by the positive development of demand for dairy products. As a result, the price levels of dairy products in 2011 were higher on average than the previous year.

A combination of limited supply and increasing demand in early 2011 led to rising prices as reflected in higher prices for butter and milk powders.

Partly under the influence of dry weather the European milk supply increased less than expected in the spring, so the seasonal pressure on prices was also less significant. In consequence butter prices start to increase from mid-May and milk powder market prices could recover from the usual low levels in spring which were only temporary.

The market picture after the summer was affected by fluctuations in exchange rates due to the world debt crisis. A positive factor was weakening of the euro against the U.S. dollar, keeping European exports more competitive on the world market. Despite the financial and economic turmoil and increasing milk production in both the EU and worldwide, the dairy market remained quiet to the end of the year.

<sup>&</sup>lt;sup>2</sup> The Humana and Nordmilch cooperatives combined their company activities from March 2011 in the Deutsche Milchkontor(DMK).

#### 2.4 Milk price and market developments in 2012

Rapidly growing milk production in Europe, Oceania and the United States combined with falling demand has lead to reductions in revenue on the dairy market since the beginning of 2012. This downward price trend made customers increasingly cautious so that the downward trend was reinforced. The reaction on the butter market was especially strong. In 2012 the average level of traded dairy products on the GDT³ by mid-May had decreased almost 25%. The (Dutch) quotations for butter and milk powder are well below the level of last year (and of 2010). However, they have not dropped to the extremely low levels of 2009 and in early June an end to the decline appears to have started. At the auction of 5 June 2012 GDT prices were rising again. Whether the floor for this year has been reached will depend on how supply and demand will continue to respond to price signals from the market.

Milk prices (to end April 2012) have fallen less than would be expected on the basis of developments in the dairy market (see Figure 2).

Assuming that the market situation and milk prices will not change much in the rest of 2012, a fall in milk price of between 5 and 10% for the whole of 2012 should be expected.

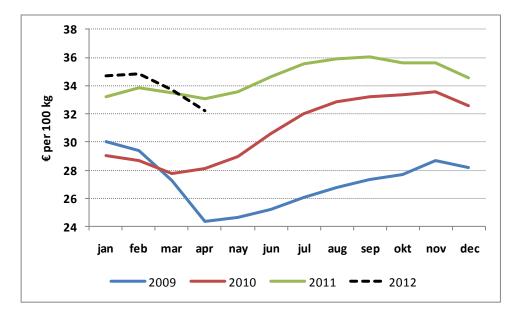


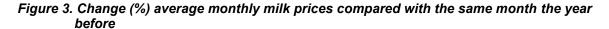
Figure 2. Development of average monthly milk prices from January 2009 to April 2011

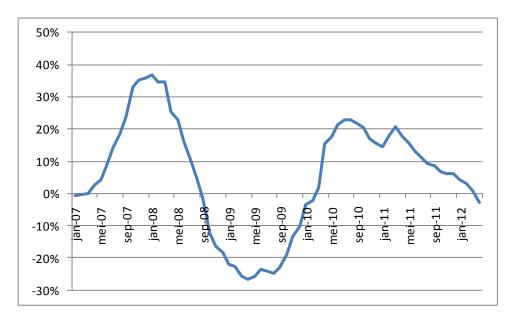
#### 2.5 Cycle of milk price fluctuations

Now that milk prices have come to fluctuate once more some people wonder if the dairy market is also to enter a pork cycle. This term refers to a market in which surpluses and deficits will alternate, because production increases in response to higher prices and then with the increased supply - and insufficient rise in demand - prices go down again, with lower production as a response after which the cycle is repeated. The phenomenon is recognized especially in livestock markets, hence the name pork cycle.

The question whether there is such a pork cycle in the dairy market cannot be answered on the basis of the data in the LTO Milk Price Comparison. Figure 3 shows how long the periods of rising and falling milk prices have lasted in recent years.

<sup>&</sup>lt;sup>3</sup> Global Dairy Trade (GDT)(www.globaldairytrade.info) is a New Zealand internet auction at which dairy products are traded internationally and is therefore a good indicator of price developments on the world market. Price changes are published in the so-called GDT-TWI index.





To exclude the seasonality of milk prices in figure 3 the average monthly milk prices of the 17 European dairies are compared with the same month in the year before. The milk price in January 2008 was 34.7% higher than in January 2007. After this peak prices fell during 15 months in a row. In April 2009 the milk price was 26.5% lower the year before. After this low prices increased during again15 consecutive months until the next peak in July 2010. After a fall and increase prices dropped from March 2011 onwards until now (mid June 2012).

#### 3. Milk pricing systems

There have been interesting developments regarding the systems for paying for milk. In this section some are explained, namely:

- Two Price (A and B) system (Sodiaal and Danone)
- Fixed milk contract (Glanbia) Milk and Milk price quarantee certificate (Netherlands)
- International contracts (First Milk)
- Forecasts (Sodiaal, Dairy Crest, DOC Kaas)

#### **Two Price System**

Starting in 2011 the French Sodiaal has used a two-price system. For 96% of the milk quota an Aprice based on national recommendations applies for the individual dairy farmer. For the rest of the milk supplied a B-price is paid that depends on the selling prices of butter and skimmed milk powder.

Sodiaal aims, over the years, to allow the percentage of A milk to reduce gradually to 85% by the time that the milk quota system is abolished in 2015. In the summer months July, August and September - when milk production is low - the A-price will be paid for all milk delivered. From 2012 Danone is also using an A and B system, in which the monthly A-volume is based on

a determined percentage of the producer's quota, as with Sodiaal. The table below shows the A and B prices paid (expressed in Euros per 100 litres of milk with 38 grams of fat and 32 grams of protein).

Figure 4. A and B prices Sodiaal In € per 100 liters of milk with 38 grams of fat and 32 grams of protein per litre



# Fixed milk prices

Dairy farmers supplying Glanbia (Ireland) can receive a fixed price for a part of their milk for a period of 3 years. Dairy farmers can thus cover the risk of major milk price fluctuations. In turn, Glanbia can hedge the price risk by agreeing with the buyers on fixed sales prices for a portion of the dairy products to be sold.

In these contracts between farmers and Glanbia, dairy farmers receive a base fixed price<sup>4</sup> of 28 cents per litre with corrections per % more or less fat and more or less protein plus a complementary sum based on a forecast, indexed increase in cost price (inflation rate). For 2012, an inflation rate of 2.4 cents applies bringing the total milk price to 30.4 cents per litre. In addition, a market adjuster is introduced when the milk prices paid by Glanbia average higher than 33 cents /litre or lower than 24 cents/litre. In such cases, the fixed milk price is raised or lowered by 1 cent for every cent that the average milk price is higher than 33 or below 24 cents.

<sup>&</sup>lt;sup>4</sup> The basic price applies to milk with 3.6% fat and 3.3% protein.

In the Netherlands dairy farmers can hedge their milk price risk through the purchase of so-called Milk Price Guarantee Certificates since the beginning of 2012. These certificates are offered by an independent market player, DTO<sup>5</sup>. The milk price guarantee certificate is a financial product. Each contract comprises a volume of 50 000 kg of milk. In February, the first certificates are negotiated for a period of one year and a fixed price of 34 cents per kg of milk. Each month, the difference between this fixed price and FrieslandCampina's variable guaranteed price is credited or debited. If FrieslandCampina's guaranteed price is 33 cents the dairy farmers will receive 1 cent per kg. If the guaranteed price increases over 34 cents the farmer must pay the difference to DTO. Every dairy farmer can purchase certificates regardless of the buyer to whom the milk is delivered and of the milk price actually received. FrieslandCampina's guaranteed price is only used as pricing for settlements. When certificates are being purchased costs are charged relating to the volume and duration.

#### Different milk pricing systems

In the United Kingdom, the milk supply contracts between farmers and buyers are highly differentiated depending on the destination of the milk once it has been processed. This is not just an end product differentiation (cheese, milk etc), but also and especially applies in relation to purchasing supermarkets. Thus First Milk and Dairy Crest use a dozen different milk contracts. Since last year, the First Milk member dairy farmers have had the possibility to receive a milk price which is linked to returns from commodity markets. The milk is processed into butter and skimmed milk powder and the milk price paid to farmers tracks movements in the Dutch Quoted prices. With these international contracts dairy farmers can benefit more from the price rises on international markets, but of course also run more risks when prices are falling.

#### Forecasting milk deliveries

The abolition of milk quotas will mean that the buyers of milk will want to reach agreements with farmers to a greater extent about the expected milk supply. Thus DOC Kaas is working on a forecasting model for each individual farmer. A number of other companies, such as Dairy Crest, First Milk and Sodiaal have already introduced such a model.

Sodiaal pays a premium to dairy farmers who have correctly estimated in advance how much milk they will supply in a given month. This so-called ASAP<sup>6</sup> bonus can reach up to  $\in$  5 per 1000 litres if the actual quantity supplied differs less than 2% from the stated estimate. If the difference is between 2 and 3% then the premium is  $\in$  4 and between 3 and 4%  $\in$  2 per 1000 litres.

<sup>6</sup> Assurance Sécurité Approvisionnement Partagée (ASAP) (Joint undertaking for security of supply (of milk))

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<sup>&</sup>lt;sup>5</sup> Dairy Trading Online BV (DTO) a joint venture of DCA Knowledge Centre and Steegro.

# 4. Dairy companies and explanation of calculated milk prices

Table 2 shows that eight of the dairy companies in the milk price comparison are among the 20 largest dairy companies in the world. These are the companies in **bold type** in Table 2.

Table 2. World's largest dairy companies

	Company	Country	Dairy turnover (€ billion)			
1	Nestlé	Switzerland	18.6			
2	Danone	France	14.0			
3	Lactalis	France	13.4			
4	Fonterra	New Zealand	11.3			
5	FrieslandCampina	Netherlands	9.7			
6	Dairy Farmers of America	USA	9.3			
7	Dean Foods	USA	8.4			
8	Arla Foods	Denmark/Sweden	7.4			
9	Kraft Foods	USA	5.5			
10	Meiji	Japan	5.3			
11	Unilever <sup>1</sup>	Netherlands/United Kingdom	5.2			
12	Saputo	Canada	4.9			
13	DMK <sup>1</sup>	Germany	4.5			
14	Sodiaal <sup>1</sup>	France	4.4			
15	Yili	China	4.2			
16	Mengniu	China	4.2			
17	Bongrain	France	4.0			
18	Müller <sup>1</sup>	Germany	3.3			
19	Schreiber Foods <sup>1</sup>	USA	3.2			
20	Land O'Lakes	USA	3.1			
Source: Rabobank International 2012 (dairy turnover 2011+ mergers and acquisitions between January 1st and June 15 <sup>th</sup> 2012  1) Estimate						

Increases of scale are continuing in the dairy industry with some notable mergers and acquisitions. **Lactalis** took a majority interest in Italian Parmalat. **Arla** merged with the German dairy company Hansa-Milch and announced plans for mergers with German coop Milch-union Hocheifel (MUH) and UK's coop Milk Link. Arla is also looking to strengthen its presence on the Chinese market by signing an agreement with Chinese Mengniu, number 16 in de Top 20 of world's largest dairy companies.

German cooperatives Nordmilch and Humana Milchunion merged under the name of **DMK** (Deutsches Milchkontor GmbH and private German Müller group took over UK's Robert Wiseman Dairies.

#### 4.1 Explanation of calculated milk prices per company

The Finnish **Hämeenlinnan Osuusmeijeri**, with the milk money settlement of March 2012, made an additional payment of 2.9 cents per litre of milk delivered in 2011. The calculated supplementary payment is € 2.82 (2010: € 3.59) per 100 kg.

**Granarolo's** calculated milk price covers the northern region of Italy and consists of a base rate and supplements for fat and protein content, quality and quantity of milk delivered. The basic price is determined quarterly.

**FrieslandCampina's** milk price consists of the guaranteed price, a performance supplement and a reserve element in the form of fixed member bonds (registered reserve) that depends on the year's results of the firm. The monthly guaranteed price is an estimate based on the milk prices of reference companies in Germany, the Netherlands, Denmark and Belgium. The final guaranteed price corresponds to the annual prices of the reference companies, including supplementary payments and reserves in the form of fixed member bonds of the reference companies.

The calculated guaranteed price for standard milk in 2011 is € 35.55 per 100 kg including a supplement on the basis of the final milk prices of the reference companies of € 0.06 per 100 kg. The performance payment and allocation to reserve are, respectively, 2.962% and 1.975%, or a total of € 35.55 per 100 kg of milk which, adjusted for the time of payment gives a calculated additional payment of € 1.79 (2010: € 1.84). This brings the price of milk for 2011 to € 37.15 per 100 kg.

The final 2011 milk price paid by **DOC** cheese is € 36.86 including a supplement of € 2.03 (2010: € 2.64). After the end of the calendar year, the member dairy farmers receive a supplement of 4% of the advance milk price (excluding quality and quantity bonuses) and € 0.68 per 100 kg of milk is paid to the members' account.

Danish **Arla Foods**' calculated milk price for 2011 of  $\in$  35.13 includes an supplement of  $\in$  1.50 (2010:  $\in$  2.55). The supplement is 4.5% of the so-called basic value of the milk delivered in 2011. The basic value is the value of fat and protein plus the quality value supplement of 4% for milk of the highest quality. The calculated supplement includes a reserve in the name of the farmer of 4.2 DKK or  $\in$  0.56 per 100 kg of milk.

Molkerei **Alois Müller** has made an additional payment of € 0.38 per 100 kg (2010: € 0.235) for 2011.

The **French** dairy companies follow the national recommendations in their milk prices. These recommendations are compiled quarterly by representatives of the dairy farmers and industry based on market data collected by CNIEL<sup>7</sup> and calculated indices. The reference prices rose on average by 7.6% from € 300.10 in 2010 to € 322.95 in 2011. These rates are per 1000 litres of milk containing 38 grams of fat and 32 grams of (true) protein per litre. The calculated milk prices of French firms in the milk price comparison in 2011 rose by between 7.3% (Danone) and 8.3% (Sodiaal). Because the national recommendations may be further developed at the regional level and because account is taken of the composition of the product range of the individual companies, the evolution of prices of individual companies differ from the national average.

**Sodiaal** uses a so-called A and B system. To date, the calculation of milk price is based entirely on the A-price. Owing to the relatively limited volume of B-price milk and the relatively small price differences between A and B (see also Chapter 3) the average milk price differs little from the A-price.

**Milcobel** has paid a supplement of  $\in$  0.013 for the number of kilograms of fat and protein delivered in 2011 (2010:  $\in$  0.055) or  $\in$  0.10 per 100 kg of standard milk. Including this supplement Milcobel's milk price in 2011 was  $\in$  34.18.

**Glanbia's** calculated milk price includes the seasonal supplements of 4 cents in January and February and 1.5 and 5.5 cents per litre in October and November, respectively. In June 2011, **Kerry** retroactively, increased the prices paid for fat and protein in delivered in April and May.

As in previous years, in November 2011 **Humana Milchunion eG** increased the milk prices paid retrospectively from January. This retroactive increase of € 0.60 per 100 kg is reflected in the monthly milk price and therefore not included as a separate supplementary payment. Because the member dairy farmers of Humana Milchunion do not receive remuneration for the interest on the

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<sup>&</sup>lt;sup>7</sup> CNIEL is Centre National Interprofessionnel de l'Economie Laitière (National Interprofessional Centre for Dairy Economics)

capital invested in the company the milk price is corrected by an average figure of  $\le 4.40^8$  on average per 100 kg milk as a negative supplement of  $\le 0.12^9$ .

The calculated milk price of **Nordmilch** includes a volume bonus of € 0.15 per 100 kg. Because Nordmilch pays a market-based rate of interest on the capital invested in the company by the members the calculated milk price is not adjusted for this capital.

From 2011, the members of Nordmilch and Humana Milchunion, whose companies have merged into DMK, have received the same milk price, except for the Nordmilch quantity bonus. In the course of 2012 a general meeting of members of Humana and Nordmilch will decide on further integration of the two milk pricing systems.

**Dairy Crest's** calculated milk price relates to dairy farmers who supply the Davidstow cheese factory through Dairy Crest Direct. **First Milk's** milk price refers to the cheese contract within the so-called dual pricing system. In this system, a higher or lower price is paid for part of the milk depending on the season and is comparable to a system of seasonal levies and supplements. First Milk has paid a dividend in recent years on the capital invested by the members in the company. This dividend is not taken into account in the calculated milk prices.

#### 4.2 Emmi Switzerland

Emmi AG group is listed on the stock exchange and is the largest dairy company in Switzerland. Annually it processes about 1000 million kg of milk which is about 30% of the total milk production in Switzerland. In Switzerland, there are several channels for milk of which about 2/3 are so-called factory milk. In addition, for example, there is a channel for milk from farms that do not feed silage to the cattle and whose milk is processed into specialty cheeses such as Emmentaler and Gruyère. The figure used for the milk price comparison is that of factory milk.

In Switzerland there are around 26 000 dairy farmers who, since 2007, have negotiated agreements with buyers about prices and conditions through regional product organizations, called  $P(M)Os^{10}$ .

From 2012 the monthly milk payment accounts feature different basic prices and corresponding quantities for A, B and C milk. These prices are oriented towards those determined by BOM Milch - the national milk trade branch of the producer organizations - such as the target price for A milk 11. In early 2012, 65% of the milk delivered was paid at the A-rate, 25% at the B-rate and 10% at the C-rate.

In 2011 a scheme of differing prices was also used, but this was expressed as an average price (basic price minus an amount according to the milk market segment).

The basic price applies to milk with 4.0% fat and 3.3% protein. As, for example, in Germany, the basic price is increased or decreased by a fixed amount per % more or less fat and/or protein in the milk in question. Emmi's calculated milk price includes a volume bonus and monthly seasonal bonuses or deductions. For milk with a bacterial count of 24 999 per ml and a cell count of 249 999 per ml neither a bonus nor a levy applies.

However, there are deductions from the milk price to finance the producer organizations and for market and intervention funds.

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<sup>&</sup>lt;sup>8</sup> Dairy farmer members must purchase shares, the number of shares being dependent on the quantity of milk delivered. For a farm with annual deliveries of 500 000 kg this is 440 shares at EUR 50 each, or on average EUR 4.40 per 100 kg.
<sup>9</sup> The figure of EUR 0.12 is 2.65% of EUR 4.40 (interest rate on 10-year government bonds).

<sup>&</sup>lt;sup>10</sup> PO = Producer Organization, PMO is a producer organization linked to a milk processor (Produzenten-Miclhverarbeiter Organization)

<sup>&</sup>lt;sup>11</sup> Å: products with high added value (protected or supported), B: products with lower added value and increased competition (no support or protection) and C: products without aid (NB On www.ip-lait.ch is a table of products by market segment)

BO Milch publishes (monthly) A, B and C target prices for milk with 4.0% fat and 3.3% protein based on the development of market prices of dairy products and cost of the farmers.

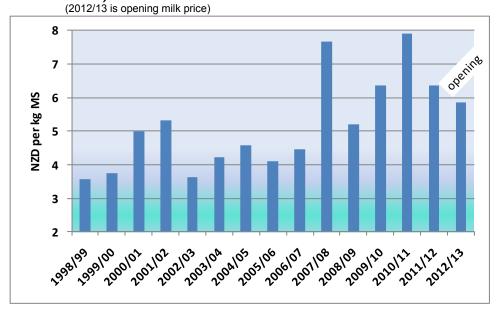
#### 4.3 New Zealand and the United States

**Fonterra** paid a record milk price to its member farmers in 2010/11<sup>12</sup>. **Fonterra's** calculated milk price 2011 is based on a final milk price of 7.90 in the year 2010/11 and an expected milk price of 6.365 New Zealand dollars (NZD) per kg of fat and protein milk solids (MS) for 2011/12. In September 2012 Fonterra will publish the final milk price for 2011/12.

Fonterra's milk price includes a dividend payment. Thus, the latest estimate of the milk price for 2011/12 is 6.05 NZD per kg MS plus 0.315 expected dividend (= 70% of 45 cents).

For the new milk year and financial year 2011/12 from June 2011 Fonterra is using an opening milk price of 5.50 NZD per kg MS. Taking into account the expected dividend of 35 cents, this price is converted to 5.85 NZD per kg MS.

Figure 4. Fonterra milk prices 1998/99 to 2012/13 (NZD per kilogram of fat and protein (milk solids)



The calculated milk price for the **United States** is based on monthly Class III component and milk prices announced by the U.S. Department of Agriculture (USDA). The Class III price is for milk that is processed into cheese. The calculated milk price of € 32.70 in 2011 was the second highest. Only in 2001 was the calculated milk price higher. But that is because in this equation the milk prices are converted into euros and the value of the U.S. dollar was high against the euro in 2001. Expressed in national currency 2011 was a record.

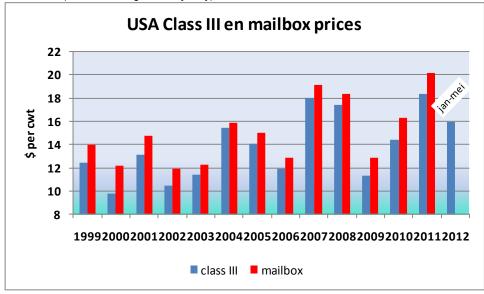
Because a lot of milk in the United States is processed into cheese, the milk price for class III gives a good indication of the development of milk prices in the USA.

The milk prices paid to dairy farmers in practice vary depending not only on the product to which the milk is processed, but also per state and per buyer. Another indicator of the U.S. milk prices is the 'mail box' prices. The mail box prices reflect the average prices paid for milk based at average fat test results and including premiums and cost deductions. The mail box prices are released about 3  $\frac{1}{2}$  months following the month of production and U.S. average is based on a weighted average excluding California. Class III announcements are made at the beginning of the month of production.

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<sup>&</sup>lt;sup>12</sup> The milk year in New Zealand runs from June 1 to 31 May.

Figure 6. USA Class III prices and mailbox prices (2012 is average January-May)



# Annex I Key figures dairy companies

Source: annual reports of dairy companies

#### Milcobel

In 2010 Milcobel collected 3% more milk by an average of 3.296 suppliers. The average milk delivery amounted to 333.275 litre per supplier, an increase of 5.6% compared to 2009.

Turnover share Milcobel 2010 (in %)

17.0%

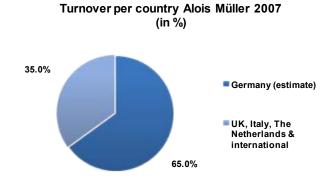
Dairy

Ice Cream

Distribution & cheese packaging

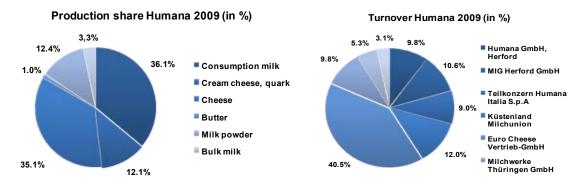
#### **Alois Müller**

Alois Müller is one of the largest milk producers in Germany and the United Kingdom. The turnover of the company amounted to 2.2 billion Euros in 2010.



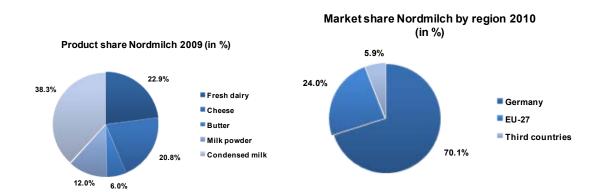
#### **Humana Milchunion**

For 2010, Humana Milchunion estimated turnover is 2.0 billion euro. The turnover in 2009 amounted to 1.7 billion euro. Milk deliveries in 2009 amounted to 2.7 billion kilos of milk, which is an increase of around 460 million kilos compared to 2008. In 2010 Humana Milchunion and Nordmilch have joined to become Deutsches Milchkontor GmbH, one of the biggest players on the German dairy market.



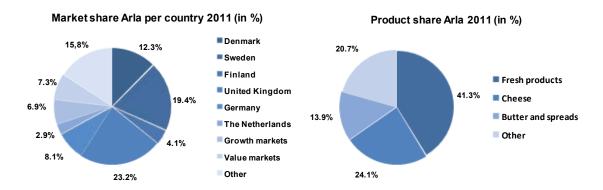
#### Nordmilch

With an annual milk processing of 3.9 billion kilos, Nordmilch is the largest dairy in Germany. Nordmilch achieved a turnover of 1.9 billion euro in 2009.



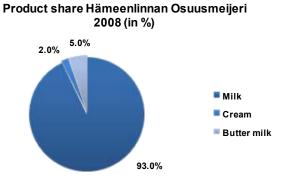
#### **Arla Foods**

Arla Foods is a dairy co-operation owned by 8,024 Danish, Swedish and German dairy farmers. Milk supply from the dairy farmers amounted to 9,214 million kilos of milk.



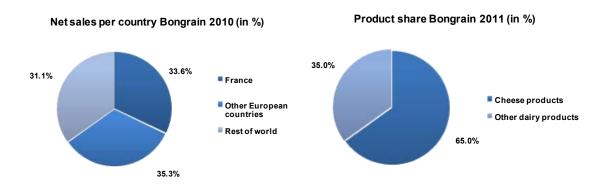
#### Hämeenlinnan Osuusmeijeri

In 2010 the turnover of Hämeenlinnan Osuusmeijeri amounted to 58.9 million Euros. The company processed 111 million litres of milk.



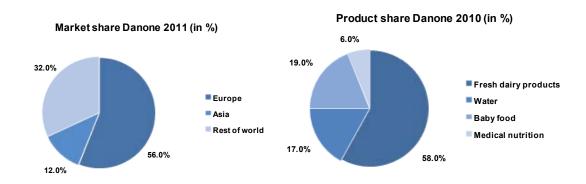
#### **Bongrain**

In 2011 net sales of Bongrain amounted to 3.9 billion euro. Bongrain processes around 3 billion litres milk a year.



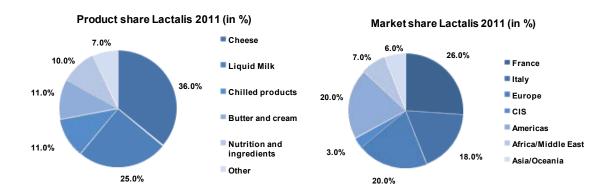
#### **Danone**

Danone's sales of all four product categories grew by 7.8% in 2011. Worldwide sales of fresh dairy products rose by 4.6%. Total turnover was 19.3 billion euros in 2011.



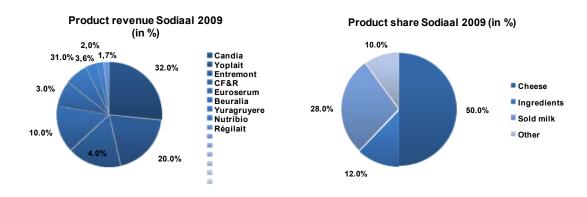
#### Lactalis

In 2011 Lactalis collected 13.6 billion litres of milk and achieved a turnover of 14.7 billion euros.



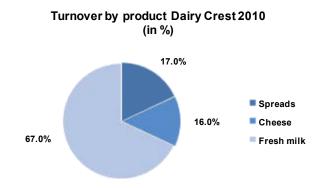
#### Sodiaal

The French dairy Sodiaal mainly has its market shares in the area of Western Europe, with France as its main base market. In 2010 13,000 milk suppliers delivered an average of 315,385 litres of milk. Total milk delivery amounted to 4.1 billion litres in 2010.



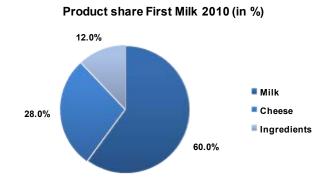
#### **Dairy Crest**

Dairy Crest is the largest milk processor in the United Kingdom. In 2011 Dairy Crest achieved a turnover of 1.6 million pounds. The company processes 2.1 billion litres of milk into cheese, milk, butter and spreads.



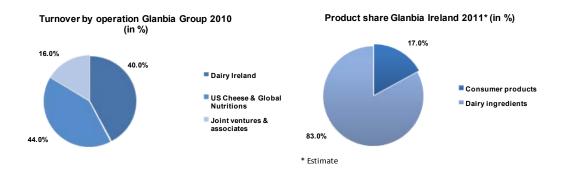
#### First Milk

First Milk is the largest dairy co-operation in the United Kingdom. Most of First Milk's production is processed into liquid milk. First Milk's annual production of milk is around 1.6 billion litres.



#### Glanbia

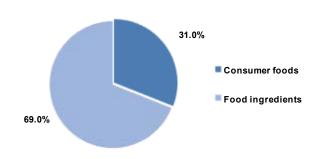
In 2011 Glanbia processed 5.8 billion litres milk worldwide. In Ireland 1.6 billion litres is supplied by about 4,800 dairy farmers. This is about 30% of Irish milk production. Besides consumer products Glanbia produces a wide range of ingredients.



### Kerry

In 2011, Kerry Group achieved a turnover of 5.3 billion Euros. Kerry Foods is a key supplier of the largest supermarket chains in Ireland and the United Kingdom.

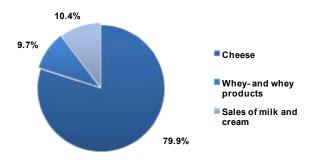




#### **DOC Kaas**

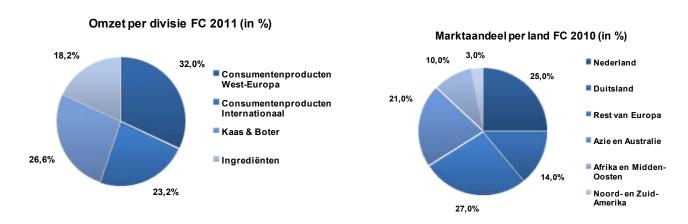
The turnover of DOC Kaas amounted to 448 million Euros in 2011.





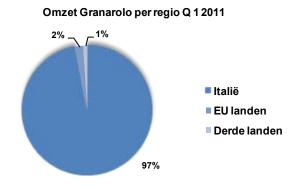
#### **FrieslandCampina**

In 2011, FrieslandCampina achieved 25% of the total turnover in The Netherlands. Milk was supplied by 19,848 Dutch, German and Belgian member dairy farms. In 2011, total milk deliveries stabilized around 8.8 billion kilos of milk.



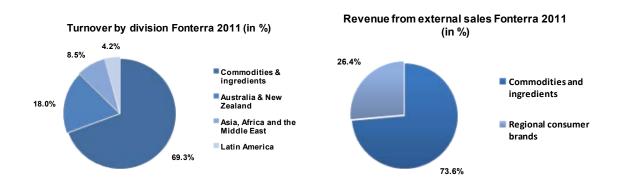
#### Granarolo

Granarolo is Italy's largest fresh milk producer. In the first quarter of 2011 turnover was 229 million Euros. An increase of 1.9% compared to 2010.



#### **Fonterra**

Total milk production of Fonterra amounted to 1,346 billion kg milk solids for the season 2010/11. Milk is supplied by 11,000 dairy farmers and amounts to over 15 billion litres a year. Yearly turnover of Fonterra amounts around to 20 billion NZD.



Milk prices 1999 t/m 2011 (€ per 100 kg standard milk) Annex II

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	average
Granarolo (Noord)										41.05	34.75	34.92	40.40	37.78
Hämeenlinnan O.	33.94	34.27	35.62	36.20	36.03	36.07	34.95	36.03	37.61	44.43	39.52	39.22	43.28	37.47
Alois Müller									34.92	34.34	24.56	30.79	35.04	31.93
DOC Kaas									35.68	30.97	23.47	32.41	36.86	31.88
Arla Foods DK	31.80	32.27	33.05	33.08	32.09	30.13	29.39	28.80	31.70	36.42	27.51	32.38	35.13	31.83
FrieslandCampina	30.64	31.94	34.03	32.10	30.80	30.03	29.25	28.73	33.61	35.36	26.22	32.82	37.15	31.74
Danone (Pas de Calais)	31.05	31.82	33.00	32.00	31.57	30.66	30.06	29.02	30.79	35.91	29.65	32.20	34.55	31.71
Bongrain (Basse Normandie)	30.95	31.71	32.90	31.79	31.38	30.46	29.72	28.81	30.68	35.47	29.58	31.81	34.34	31.51
Lactalis (Pays de la Loire)	31.02	31.75	33.08	31.87	31.61	30.70	29.77	28.70	30.48	35.27	29.34	31.65	34.17	31.49
Sodiaal Union	30.55	32.07	33.19	31.71	31.12	29.97	29.11	28.13	30.49	35.58	29.66	31.71	34.34	31.36
Campina	30.90	30.94	33.39	33.00	30.76	29.96	29.52	28.56	33.16					31.13
Milcobel	28.82	32.05	32.91	30.29	30.30	30.73	29.18	28.33	35.37	32.65	25.25	31.96	34.18	30.92
Humana MilcHunion eG	29.49	30.76	33.42	31.35	29.87	29.08	27.99	27.76	33.54	35.20	25.06	30.02	34.08	30.59
Glanbia	30.32	30.89	31.77	29.40	28.89	28.88	27.39	26.54	32.95	33.54	22.67	29.72	34.14	29.78
Nordmilch	29.00	30.19	33.09	28.99	27.67	27.98	27.61	27.15	32.15	31.42	23.43	30.39	33.75	29.45
Kerry Agribusiness	28.74	29.44	30.49	28.58	28.11	27.75	27.15	26.14	32.70	33.03	22.71	29.00	33.61	29.03
Dairy Crest (Davidstow)/Arla UK	28.13	27.13	30.66	28.22	26.48	27.53	27.32	27.97	29.70	32.73	27.88	28.75	31.76	28.79
First Milk	25.93	25.95	29.39	25.80	24.77	25.52	25.39	24.40	27.34	31.03	24.24	25.26	28.83	26.45
Average 1)	30.09	30.88	32.67	30.96	30.10	29.70	28.92	28.34	32.52	34.96	27.38	31.47	35.04	31.38
Fonterra	13.74	16.75	18.45	15.96	15.74	18.19	18.49	17.28	25.67	22.75	20.80	30.37	30.12	20.33
USA class III	29.00	26.61	36.89	27.72	25.04	31.33	28.16	23.47	32.12	29.37	20.24	27.23	32.70	28.45
Emmi 2)												45.03	48.90	

<sup>1)</sup> From 2007 onwards including Alois Muller en DOC Kaas and from 2009 onwards excluding Campina 2) Emmi unweighted average 2011 and May – December 2010

# Annex III Average currency exchange rates 2011 en 2010

Foreign currency in euro

	2011	2010	2011/2010
British Pound	1.1542	1.1710	-1.4%
Danish Crown	0.1342	0.1343	0.0%
US dollar	0.7196	0.7580	-5.1%
New Zealand dollar	0.5689	0.5470	4.0%

# Bijlage IV Milk prices United States and New Zealand in national currency

United States in US dollars per hundredweight (1 cwt = 45.36 kg) and New Zealand in New Zealand dollars per kg milk solids (is fat and protein)
For New Zealand 1999 corresponds with 1999/2000 etc.

	USA Class III \$/cwt	USA Mailbox \$/cwt	Fonterra NZD/kg MS
1999	12.45	13.99	3.75
2000	9.74	12.15	5.00
2001	13.10	14.77	5.33
2002	10.42	11.91	3.63
2003	11.42	12.28	4.23
2004	15.40	15.90	4.59
2005	14.05	14.98	4.10
2006	11.89	12.84	4.46
2007	18.04	19.16	7.66
2008	17.44	18.40	5.20
2009	11.36	12.82	6.37
2010	14.41	16.29	7.90
2011	18.37	20.20	6.37
2012	15.96		5.85