

LTO International comparison of producer prices for milk

2018

*prezzi di latte • melkprijzen • prix du lait • molkeprizen
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Foreword

This year, ZuivelNL again carried out an international milk price comparison on behalf of the LTO dairy farming committee. We still consider it important for the primary sector to understand milk price levels and the mutual relationship of the prices of European dairy companies. After all, over 80% of the operating income in the dairy farming sector consists of milk payments.

Looking at the milk price in the past year, we see it was rarely as stable as in 2018. However, we see a shift in the prices of commodities. Last year, butter had to settle for a lot less compared to 2017, when the price rose to an unprecedented level. Milk powder and cheese did not do badly at all. That the milk price has been so stable and at an acceptable level has meant that it has not really been a subject for discussion among Dutch dairy farmers.

The main topic in the Netherlands still is the phosphate legislation. Although it is clear to many dairy farmers what the law means to them, the authorities have not yet fully implemented it. The dairy farming sector is also concerned about the climate, ammonia (Integrated Approach to Nitrogen (Dutch abbreviation PAS)), biodiversity and health, especially young calves. We see that the government, sometimes under social pressure, is changing its policy. Besides organic and meadow milk, the market also has a need for dairy, with extra demands being placed on animal welfare and the environment on the dairy farm. We are also very proud that we achieved our sector target for the so called meadow milk last year. In 2018, the percentage of dairy farms with outdoor grazing increase to 82%.

Special milk flows are important for retail and dairy companies to meet consumer demand and to be distinctive. For the dairy farmers, it bears a resemblance to a forest of conditions and reimbursements that is difficult to understand. At LTO, we believe it is important to provide insight into the different flows and the conditions and compensation in place. In other words, what do they mean to the farmer? Next to the international milk price comparison, LTO also wants to make a milk flow comparison.

Wil Meulenbroeks

Chairman Dairy Committee of the Dutch Federation of Agriculture and Horticulture (LTO Nederland)

1. Introduction and notes for readers

1.1 Introduction, method and assumptions

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 ZuivelNL.

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 1,000,000 kg.

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

It must be emphasized that this 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 amount of supplementary payments are not corrected for the date of payment.

The monthly milk prices are weighted on the basis of national monthly milk deliveries (source: ZuivelNL). The weighting of the 2017 and 2018 monthly milk prices is based on the average of the monthly deliveries in 2017 and 2018.

The present publication comprises the milk prices calculated for the calendar year 2018.

1.2 Notes for readers

Chapter 2 features the calculated milk prices for 2018 (paragraph 2.1), followed by the milk price developments outside the EU (2.2) and the dairy market in 2018 (2.3).

In chapter 3 trends of milk prices and dairy markets in the first half of 2019 are described.

In chapter 4 additional information about the calculated milk prices per company is given.

In chapter 5 sustainability premiums and different milk flows are analyzed.

The appendices give an overview of milk prices per dairy company from 2011 to 2018 (Annex I), the average currency exchange rates in 2018 and 2017 (Annex II), milk prices 2018 and 2017 for 500,000 (Annex III) and 1,500,000 kg standard milk (Annex IV).

2. Milk prices in 2018

2.1 Milk price comparison

After the sharp rise in 2017, milk prices decreased again in 2018. The average milk price paid by EU dairy companies decreased by € 1.19 or -3.4% compared to last year to 34.23 per 100 kg standard milk. This makes 2018 an average milk price year.

Table 1. Milk prices 2018 and 2017

In € per 100 kg of standard milk with 4.2% fat, 3.4% protein, 1,000,000 kg per year¹, tbc 24,999 and scc 249,999 per ml (excluding VAT and including supplementary payments)

Company	Country	2018		2017		2018-2017	2018/2017	National currency
Granarolo (North)	IT	38.36	1	39.81	1	-1.45	-3.6%	
Valio	FI	36.74	2	36.64	4	0.10	0.3%	
FrieslandCampina	NL	36.07	3	38.56	2	-2.50	-6.5%	
Arla Foods DK	DK	35.48	4	36.46	5	-0.98	-2.7%	-2.5%
Royal A-ware	NL	35.13	5	37.95	3	-2.82	-7.4%	
Sodiaal (Pas de Calais)	FR	34.93	6	34.37	10	0.55	1.6%	
Danone (Pas de Calais)	FR	34.55	7	34.47	9	0.08	0.2%	
Lactalis (Pays de la Loire)	FR	33.98	8	33.55	16	0.43	1.3%	
Hochwald Milch eG	DE	33.74	9	34.08	14	-0.35	-1.0%	
Savencia (Basse Normandie)	FR	33.69	10	33.93	15	-0.24	-0.7%	
Müller (Leppersdorf)	DE	33.02	11	35.38	8	-2.36	-6.7%	
DMK Deutsches Milchkontor eG	DE	32.91	12	35.65	7	-2.74	-7.7%	
Dairygold	IE	32.75	13	34.26	13	-1.51	-4.4%	
Milcobel	BE	32.72	14	35.75	6	-3.03	-8.5%	
Dairy Crest (Davidstow)	UK	32.67	15	32.65	17	0.02	0.1%	1.0%
Glanbia	IE	32.59	16	34.31	12	-1.72	-5.0%	
Kerry Agribusiness	IE	32.51	17	34.31	11	-1.80	-5.3%	
Average milk price		34.23		35.42		-1.19	-3.4%	
Emmi	CH	48.25		51.88		-3.64	-7.0%	-3.1%
Fonterra	NZ	29.40		31.63		-2.24	-7.1%	0.3%
USA class III	US	31.49		36.22		-4.73	-13.1%	-8.4%

Notes:

A number of changes have happened since the previous publication. Firstly because the standard assumes an annual delivery of 1,000,000 (was 500,000 kg). The 2017 milk prices of Emmi and Fonterra have been updated and the monthly milk prices are weighted based on the national milk deliveries in 2017 and 2018. Given these changes, the average milk price for 2017 is not the same as the average indicated in the previous publication.

As in previous years, **Granarolo** in Italy is the leader in this milk price comparison, again followed by Valio this year. Finnish top cooperative **Valio** not only pays a high milk price to the member milk cooperatives, but also a very constant one. Not only is the milk price for the calendar year 2018 almost the same as last year, but the monthly milk prices also hardly vary.

Despite Dutch milk prices fell more than average, **FrieslandCampina's** milk price remains in the top three and **Royal A-ware's** milk price is at number five.

¹ See annex III and IV for milk prices 2018 and 2017 for 500,000 kg and 1,500,000 kg per year.

Arla has risen to the fourth place in the ranking. Arla's fall in prices (-2.7%) was limited by the decision not to set aside any part of the profit for 2018, but to distribute it in full to the member dairy farmers. This decision was taken because of the drought that dairy farmers were faced with in 2018.

The milk prices of the French dairy companies have increased slightly (**Sodiaal, Danone, Lactalis**) or have decreased very slightly (**Savencia**), as a result of which they are much higher in the ranking than last year.

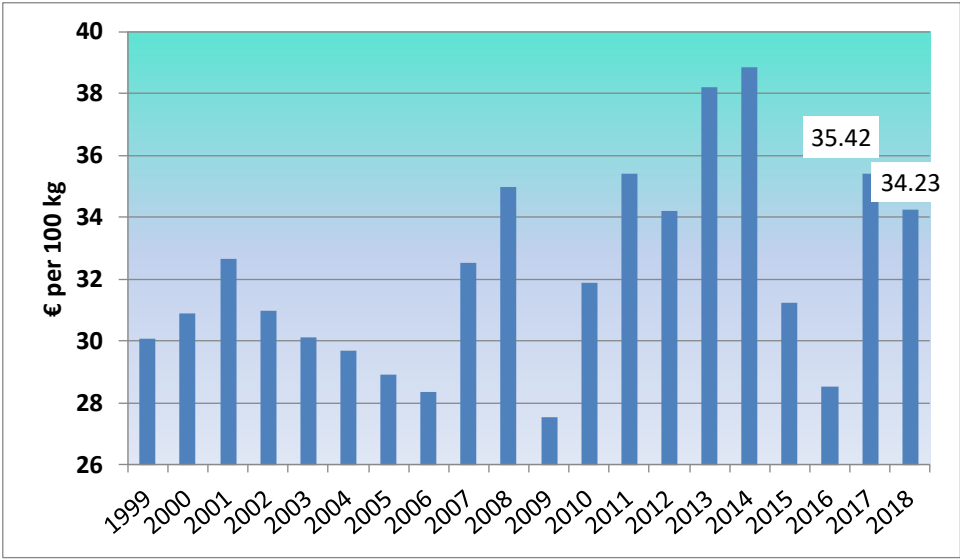
Due to a slight decrease in milk price (-1.0%), the German company **Hochwald Milch eG** has also risen in the ranking. For the other German companies **DMK Deutsches Milchkontor eG²** and **Müller Leppersdorf** milk prices decreased significantly more than average, namely by 7.7% and 6.7%.

While Irish milk prices increased the most in 2017, in 2018 the milk prices of **Dairygold, Glanbia** and **Kerry Agribusiness** decreased by 4.4-5.3% more than average.

The milk price of **Milcobel** in Belgium fell by 8.5%.

Figure 1 shows that after the peaks in 2013 and 2014 and the falls in 2015 and 2016 the 2018 milk price year was an 'average' year.

Figure 1. Average milk prices from 1999 to 2018



2.2 Milk price developments outside the European Union

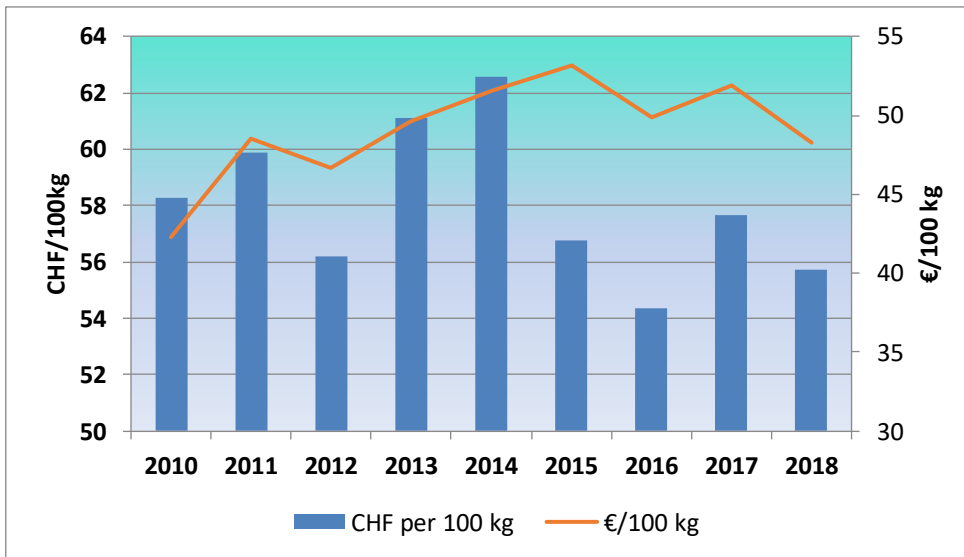
Emmi

The milk price calculated (2018: € 48.25 per 100 kg) concerns the milk price of the members of a producer group that supplies Swiss Emmi. The decrease in Emmi's milk price – expressed in Swiss francs (-3.1%) – is less than the EU average. It should be noted the supplementary ('13th month') payment for milk delivered in 2018 has not yet been included in the milk price as this supplementary payment will only be announced at the end of

² Compared to the previous publication the name of DMK has been changed to DMK Deutsches Milchkontor eG to clarify that it concerns the milk price calculated for the member dairy farmers of the German cooperative.

2019. The supplementary payment for 2017 was € 2.60 per 100 kg so probably the definitive milk price 2018 will not differ much from 2017.

Figure 2. Milk prices Emmi 2010 until 2018 (CHF and € per 100 kg standard milk)



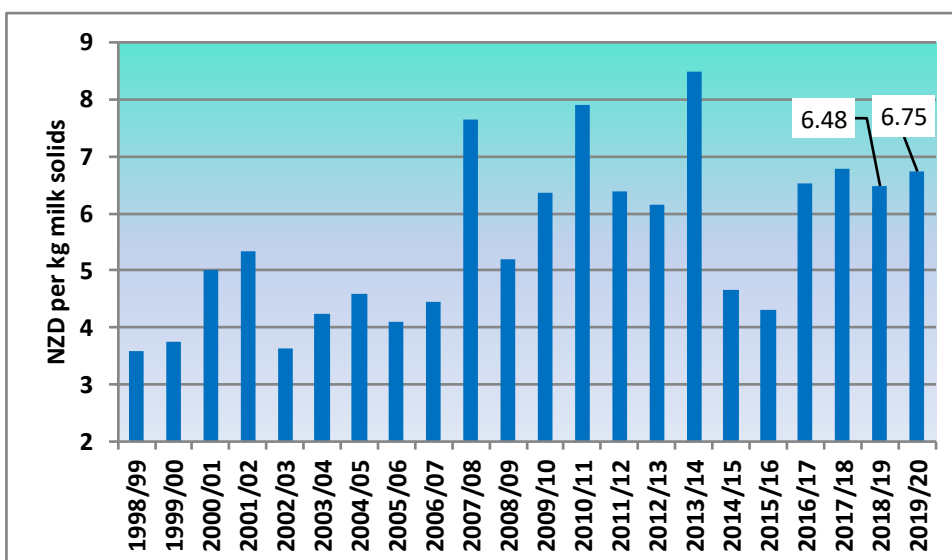
Fonterra

The milk price calculated for Fonterra of € 29.86 per 100 kg of standard milk includes dividends and is based on milk prices and milk price forecasts published by the company.

The milk price year in New Zealand runs from June to May inclusive. Therefore, the milk prices for the seasons from 2016/17 up to and including the current 2018/19 season have been converted into a price per calendar year for 2017 and 2018. The provisional milk price for 2018/19 is based on the most recent milk price and dividend forecasts of (ranges) 6.30-6.40 and 0.10-0.15 or NZD 6.475 per kg fat and protein (milk solids).

For the new season 2019/20 Fonterra has announced an opening milk price range of NZD 6.25-7.25 per kg fat and protein.

Figure 3. Milk prices Fonterra per kg fat and protein (milk solids)



2018/19: forecast - 2019/20: opening milk price

United States

As an indicator for the development of the milk price in the United States, the Class III milk price (expressed in \$ per cwt (=45.36 kg)) and associated protein and fat prices published by USDA are converted into euros per 100 kg of standard milk.

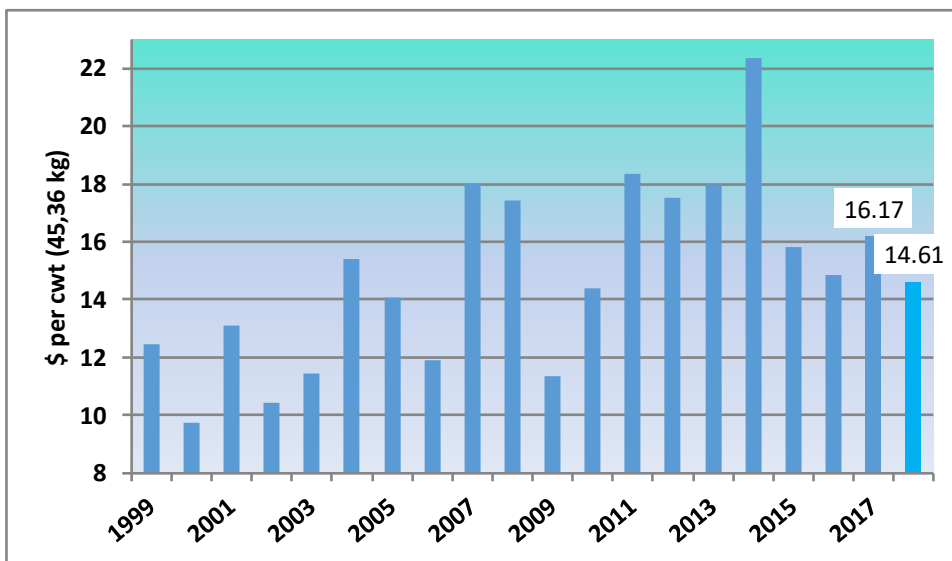
The milk price calculated in 2018 is € 31.49 per 100 kg and, unlike last year, is below the EU average

United States

The producer prices for raw milk in the United States for most (about 80%) dairy farmers are based on the so-called Federal Milk Marketing Orders (FMMOs). These FMMOs require dairy processors to declare each month how many products they have sold and at what price. By means of fixed price formulas, these selling prices are converted into minimum milk prices for raw milk that goes into 4 classes of manufacturing milk. For example, Class I concerns milk processed into drinking milk and Class III to milk processed into cheese.

In the LTO Milk Price Comparison, the Class III price was chosen as an indicator for the development of the milk price in the US, because relatively large amounts of milk are processed into cheese in both the US and Europe. The actual milk price paid in the US is about 5-10% higher because the Class III milk price is a minimum milk price – many dairy farmers receive extra bonuses, such as for quality, etc. – and because the dairy farmers receive a mix of the different classes per FMMO. The Class I milk price – in terms of size approximately equal to Class III – is slightly higher than the Class III milk price.

Figure 4. USA Class III Milk prices (\$ per cwt)



2.3 Dairy market prices in 2018

In 2018, the dairy market was to a large extent determined by very low protein prices, the reduction of the large stocks of intervention powder and the sentiment surrounding the drought. The fat prices no longer reached the sky-high levels of 2017 but were well above the long-term average.

Overall, the average price level in 2018 was lower than in 2017. The average Dutch price quotation for butter decreased by more than 4%. The average price quotation for skimmed milk powder decreased by almost 15% in 2018. The average price of whey powder also fell sharply (-11%). The average prices of whole milk powder and cheese largely followed the developments in the fats and proteins market and were 6% lower than in 2017.

3. Milk price and market developments in the first half of 2019

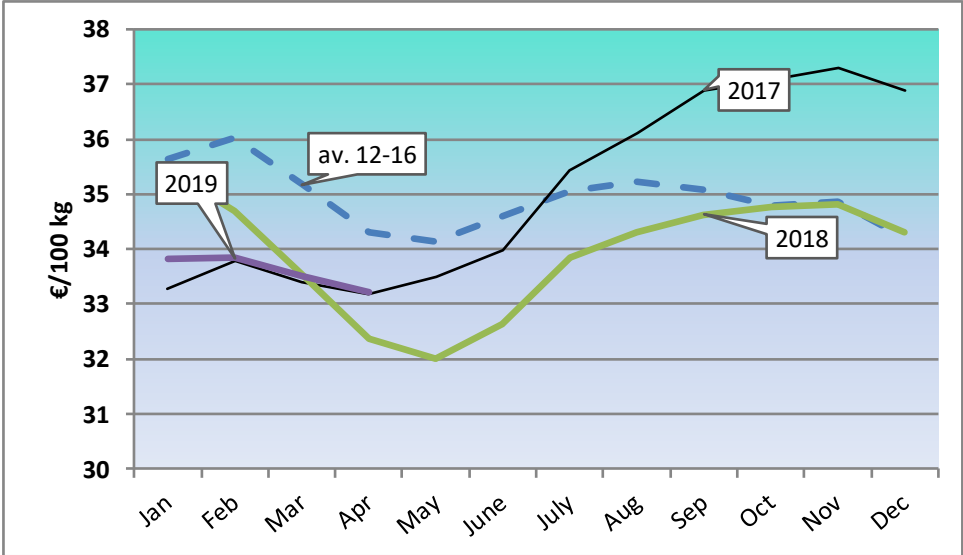
After the decrease in prices came to an end in December, the EU butter market rebounded briefly in January and higher prices were recorded. In February and March, however, the market weakened again as a result of ample supply combined with limited demand. After a temporary stabilisation of the butter price in April, these factors caused the price to weaken again from mid-May onwards. Since March, the price level of EU butter has been well below the world market price level, but this has not led to an increase in export demand. At the end of May, the Dutch butter price quotation was considerably lower than the average for 2018.

The price quotation for skimmed milk powder increased further in January and February due to good demand. Almost all the EU intervention stock was sold rapidly. The price then stabilised in March and April. Thanks to a further development in demand from exports, there was room for an upward movement in prices from the second half of April onwards. In May, the level of € 200 per 100 kg was passed and at the end of May a slight decrease was recorded.

European prices for whole milk powder were on the rise in the first quarter of 2019. European products benefited from less supply from Oceania and South America. This created a fairly stable market. Since March, prices have stabilised slightly at around € 300 per 100 kg.

In contrast to most other years, the milk price developed relatively steadily at the beginning of 2019 like in 2017. After a peak in February, milk prices decreased seasonally as a result of a higher milk production in May. The decrease in prices may be less this year due to a slower growth in global milk production.

Figure 5. Development of average monthly milk prices



4. Explanation of the milk prices calculated per dairy company

The **Granarolo** group consists of the cooperative Granlatte and the listed company Granarolo S.p.A. The cooperative of dairy farmers delivers the milk to Granarolo, which processes and markets the milk. The milk price is announced quarterly.

The milk price calculated for top cooperative **Valio** is based on one of the Finnish member dairy cooperatives, which has all milk processed and marketed by Valio.

From January 2018 onwards, the milk price calculated has been increased by € 0.97 per 100 kg. This bonus (1 cent per litre) is paid to dairy farmers for their participation in the centralised health animal care register for Finnish cattle herds (NASEVA).

The milk price calculated included a supplementary payment of € 1.02 (2017: € 0.92) per 100 kg of standard milk.

The milk price for **FrieslandCampina** includes an average bonus for outdoor grazing of € 0.63 (€ 0.60) per 100 kg and a supplementary payment of € 0.57 (€ 1.27). The supplementary payment consists of a performance bonus of € 0.45 and a registered reserve of € 0.12 per 100 kg of standard milk.

The **Arla** milk price concerns the Danish members. As of January 2018, the ratio between protein and fat prices has changed from 1.4:1 to 1.1:1. Arla has also introduced several new premiums. The milk price calculated includes the following bonuses (€/100 kg):

- Arlagården Plus participation	1.0
- Milk cooling tank buffer	0.5
- Milk tank outlet valve of 3"	0.15
- Ample room in the yard for large milk collection trailers	0.2

The milk price calculated included a supplementary payment of € 2.30 per 100 kg of milk. For 2017, the supplementary payment was € 1.28. The increase compared to last year is due to the fact that, as an exception, the profit for 2018 year has been distributed in full to the member dairy farmers. This decision was taken because the bad weather conditions in 2018 made it a difficult year for dairy farmers.

The milk price calculated for **Royal A-ware** includes a quality and quantity bonus as well as a sustainability premium (€ 0.50) and an average bonus for outdoor grazing of € 0.81 per 100 kg. From October 2018, the milk price also includes a conversion premium of € 0.50 per 100 kg for new milk flows.

From 2019 onwards (and in addition to organic milk), Royal A-ware will be using 4 different milk flows with different milk prices. The choice of one of these milk flows implicitly means that the milk price concerns a smaller volume and therefore has less value for the international milk price comparison. The calculation and publication of the Royal A-ware milk price has therefore been discontinued with effect from January 2019.

The milk price calculated for **Danone** is based on the so-called A-price. Each dairy farmer has a maximum quantity of milk per month, for which the A-price is paid. Thus, in most months, for up to 8.5% of the annual reference quantity the A-price is paid. In May (9.5%) and June to September (12.0%) there are higher percentages so as not to restrict milk production in these months, but to stimulate it. A lower B-price is paid for additional milk delivered within the annual reference quantity. This B-price is based on the value of milk published by CNIEL³, which is processed into butter and skimmed milk powder. In 2018, the B-price was on average € 3.70 /100 kg lower than the A-price. Based on the standard delivery pattern in France the effect of including the B-price in the

³ CNIEL Centre National Interprofessionnel de l'Economie Laitière

calculation of the milk price is very limited, namely minus € 0.07/100 kg). This is because the 'standard farm' supplies relatively little B-milk.

The milk price calculated for **Sodiaal** is like Danone also based on the so-called A-price. If B-milk is included in a standard delivery pattern (see also Danone explanation) this results in a € 0.37 lower milk price calculated for Sodiaal. Sodiaal's 2018 milk price includes a provisional supplementary payment of € 0.29 (2017:0.23) per 100 kg.

France

In the run-up to the abolition of milk quotas in 2015, dairy farmers and private dairy companies signed contracts in France. In these legally binding contracts, agreements are made between individual dairy farmers and/or producer organisations on the one hand and the private dairy companies on the other about the delivery of milk, including the maximum annual quantity and the price. The obligation to conclude contracts with dairy farmers/suppliers does not apply to cooperatives, which have supply terms set by the dairy farmers themselves as members/owners. The (monthly) price for farm milk in the contracts depends on the dairy company's product portfolio, indicators of price development on the dairy market and in some contracts also the development of the cost price on dairy farms. Since 2017, for example, in determining the milk price in Danone's contracts, not only market indicators have been taken into account but also cost price developments on dairy farms.

The product mix is determined on the basis of, among other things, the share of consumer products sold domestically ('Produits de Grande Consommation (PGC) France') and abroad (and PCG exports) and the share of butter and skimmed milk powder ('Produits Industriels').

The contracts often refer to indicators calculated and/or published by CNIEL: CNIEL publishes monthly market indicators, such as the standard milk price (38 g fat and 33 g protein) in France and Germany and the value of milk processed into butter and skimmed milk powder. In addition, a quarterly price development indicator for the national product mix is published. CNIEL also publishes a monthly MILC⁴ margin indicator, which shows the development of the difference between the cost price and the milk price. The cost price indicator uses an index of input prices and the average cost in 2015.

A new law, 'Loi Égalim', requires dairy companies to pay a milk price from 1 April 2019 onwards, which takes the cost price of dairy farmers into account. Furthermore, the retail prices must be at least 10% higher than the purchase prices. It remains to be seen how this will work out in practice, but it will in any case lead to more transparency in the chain.

The levy income of dairy farmers who have delivered more than their maximum reference quantity is refunded by **Lactalis** to the dairy farmers in the form of a special quality/seasonal premium in the months of July, August and September. This premium of € 0.43 per 100 kg is included in the milk price calculated.

As of July 2018, **Hochwald** has abolished the volume bonus. The milk price includes a supplementary payment of € 0.0175 (=2017) per 100 kg of milk, but the premium of € 0.75 per 100 kg for non GMO milk is not included.

The milk prices calculated by **Savencia** concern the Agrial/Eurial cooperative, which collects milk in Basse Normandy and supplies to Savencia Fromage & Dairy.

⁴ MILC stands for Marge IPAMPA Lait de vache sur Cout total indice.

Müller's milk price is based on a producer group that supplies milk to the Müller factory in Leppersdorf. The milk price includes a supplementary payment of € 0.67/100 kg (2017:0). The milk price does not include the bonus for the use of GMO-free feed of € 1.00/100 kg.

The milk price calculated for DMK concerns the milk price of the members of German cooperative **Deutsches Milchkontor eG**. DMK Group is owned by German cooperative Deutsches Milchkontor eG and Dutch cooperative DOC Cheese. Because the two cooperatives do not use the same method of payment, the milk price calculated for the standard farm may differ between the two cooperatives. For example, Dutch dairy farmers who supply DOC Cheese receive a bonus for outdoor grazing and a higher quantity bonus.

The milk price of Deutsches Milchkontor eG is, like all German companies, based on a basic price for milk with 4% fat and 3.4% protein plus a bonus or deduction for more or less fat and protein. Since 2011 this has been € 2.50 per kg of fat and € 5.00 per kg of protein. As from 2018, these amounts will be variable and in July 2018 the ratio between protein and fat prices has changed from 2:1 to 2:1.5 (and from January 2019 1:1).

The milk price calculated includes a premium of € 0.60 per 100 kg of milk for the Milchmaster sustainability programme. This is based on the average premium paid in 2016. The milk price does not include the bonus for the use of GMO-free feed of € 1.00/100 kg.

The milk price calculated by **Dairygold** includes a seasonal bonus of € 3.46 per 100 kg in February and special Weather/Fodder relief payments in March and April. As a result of the bad weather conditions and the resulting deterioration in the roughage supply, the cooperative paid this bonus in March and April.

As of February 2018, **Milcobel** has implemented changes in the payment system. For example, the protein/fat price ratio has changed from 1.86:1 to 1:1 and the volume premium based on the quantity of milk delivered has been replaced by a quantity premium based on the kilograms of fat and protein delivered.

The milk price includes a provisional supplementary payment of € 0.24/100 kg. Because the supplementary payment for 2018 will only be known in July, it is assumed that it will be the same as last year.

Dairy Crest's milk price concerns dairy farmers who supply the cheese factory in Davidstow. In accordance with a voluntary agreement by the dairy industry in the United Kingdom, the milk price is announced before the start of the month of delivery. Dairy Crest's milk prices will be announced a month earlier, for example at the end of May the July milk price will be announced.

Glanbia's milk price concerns the milk supplied to **Glanbia Ingredients Ireland Limited (GIIL)** by the members of the Glanbia cooperative. GIIL is a 60/40 joint venture between the listed Glanbia plc and the cooperative. In addition to the milk payments from GIIL, the cooperative paid bonuses and also a supplementary payment was made for the milk delivered in 2018. Both these monthly bonuses and the supplementary payment are included in the milk price calculated.

This supplementary payment – a total of € 10.9 million for 2.7 billion litres of milk – was financed from the dividend income, which the cooperative receives as a joint shareholder of GIIL. Depending on the extent to which dairy farmers have purchased fodder etc. from the cooperative, the amount of the supplementary payment ('trading bonus') varies per member. The milk price comparison is based on the average amount of € 0.40 per 100 kg.

The seasonality bonuses in February (€ 4.03) and November (€ 2.01) have also been included in the milk price calculated. As of January 2018, the ratio between protein and fat prices has changed from 2.3:1 to 1.8:1.

Afterwards, **Kerry** increased the monthly milk prices in 2018. These supplementary payments (Jan-March + 1.5 cents/litre, April +1 c/l and May to December 0.5 c/l) have been included in the milk price calculated.

As of January 2018, the ratio between protein and fat prices has changed from 2:1 to 1.5:1.

5. Sustainability bonuses and diversification of milk flows

5.1 Introduction

In addition to the 'traditional' bonuses and reductions for the quality, season and quantity of milk delivered, the dairy companies are paying more and more premiums to stimulate sustainability on dairy farms. In addition to these sustainability premiums, dairy companies are also developing more diverse farm milk flows, whereby the milk is collected and processed separately in order to be able to offer distinctive dairy products in the market. This could include, for example, meadow milk, milk produced from feed without genetically modified organisms (GMO-free milk), also known as VLOG⁵ milk.

Incidentally, separate milk flows within dairy companies are not new. These include, for example, organic milk, but also the specific contracts between British supermarket chains and dairy farmers.

This chapter explains how these premiums and different milk flows have been taken into account in the milk price comparison. After all, the aim of the LTO International Milk Price Comparison is transparency in the milk prices paid to dairy farmers.

5.2 Sustainability premiums and different milk flows

Although not from all dairy companies sufficient information is available, it is clear that all dairy companies apply sustainability programmes in some way or other, which impose requirements at farm level, for example in the areas of milk quality, the environment, welfare and animal health. The premium can be a fixed amount per kg of milk if the requirements are met or not, or an amount depending on the individual dairy farmer's score on various sustainability aspects.

The sustainability premiums are generally aimed at producing all milk more sustainably, i.e. no separate milk flows. Examples include the national sustainability programmes in Belgium (sustainability monitor), Finland (NASEVA), Ireland (Sustainable Dairy Assurance Scheme (SDAS)) and France (La Charte des Bonnes Pratiques d'Elevage (CBPE)), but also the company-specific programmes of Arla (Arlagården Plus), DMK (Milkmaster), Hochwald (Milchplus), FrieslandCampina (Foqus planet), Royal A-ware (A-ware sustainability), Sodiaal (La Route du Lait (LRDL)), Dairy Crest (Davidstow Farm Standards in addition to the British Red Tractor scheme), and Granarolo (Granlatte Strategic Plan 2018-2028).

If known, the average sustainability premium paid is included in the milk price calculated. This is an average based on the total amount paid out by the dairy company divided by the quantity of milk delivered. If this information is not available, the full premium has been included if, on the basis of publications, it is likely that the majority/vast majority of the dairy farmers meet the criteria. Without information, or when only a limited number of dairy farmers participate, the premium has not been included.

The LTO Milk Price Comparison aims to provide insight into the prices paid for comparable regular or standard milk. Although the degree of sustainability and the requirements used may vary from one company to another, it is logical to include sustainability in this standard milk if the aim is to produce all the milk in this way.

It is more difficult to deal with different milk flows per company. Some milk flows are special for one company, but standard for another. It is also possible that within a company a special milk flow becomes standard over time.

⁵ This meets the requirements of the German Verband Lebensmittel ohne Gentechnik e.V (VLOG).

Some examples of special milk flows are VLOG milk (especially German companies, but also FrieslandCampina, Royal A-ware and Arla), meadow milk (the Netherlands), On the way to PlanetProof (FrieslandCampina), AH milk (Royal A-ware), Coop milk (Emmi), etc.

If these milk flows are relatively small, they are not relevant for the milk price comparison. After all, this milk price comparison is focused on the regular, main milk flow per company. At the moment two separate milk flows seems to be the most relevant, namely milk produced with GMO-free feed (VLOG milk) and Dutch meadow milk.

In Germany in particular (Müller) GMO-free milk is or appears to be becoming the standard. Arla and Dutch companies also grant bonuses for milk produced with GMO-free cattle feed. So far these bonuses have not been included in the milk prices calculated, because despite the sharp increase in GMO-free milk, it is certainly not yet standard in Europe.

Table 2 gives an overview of how the sustainability bonuses are included in the calculation of the LTO standard milk price. For the sake of transparency, the table shows not only the sustainability premiums, but also the entire structure of the milk price calculated, as well as which bonuses have not been included.

Table 2. Structure of milk price calculated and payments not included per company

	fat and protein value	deduced costs	quality	quantity	seasonality	sustainability	other	subtotal	Supplementary payments	Milk prices 2018	NOT included
Granarolo	37,59		0,77					38,36		38,36	
Valio	34,75					0,97 ¹		35,72	1,02	36,74	
FrieslandCampina	34,99	-0,12				0,63 ²		35,50	0,57	36,07	A
Arla Foods DK	30,87	-1,45	0,94	0,00 ³		1,00 ⁴	1,82	33,18	2,30	35,48	B
Royal A-ware	33,81	-1,90	0,50	1,28 ⁵		1,44 ⁶		35,13		35,13	C
Sodiaal	33,81	-0,06	0,58			0,00 ⁷	0,31	34,64	0,29	34,93	
Danone	34,58	-0,03						34,55		34,55	
Lactalis	33,44			0,39		0,15 ⁸		33,98		33,98	
Hochwald	32,47	-0,02	0,76	0,51 ⁹		0,00 ¹⁰		33,72	0,02	33,74	D
Savencia	32,39		1,18				0,12	33,69		33,69	
Müller	30,98		0,71	0,36			0,30	32,35	0,67	33,02	E
DMK	32,23	-0,11		0,20		0,59 ¹¹		32,91		32,91	
Dairygold	36,01	-3,88	0,39		0,13 ¹²	0,10 ¹³		32,75		32,75	
Milcobel	30,76	-0,14	0,73	1,13				32,48	0,24	32,72	
Dairy Crest	25,42		0,11	0,66	0,00 ¹⁴		6,48	32,67		32,67	
Glanbia	34,74	-3,88			0,24 ¹⁵		1,09	32,19	0,40	32,59	
Kerry	36,29	-3,88				0,10 ¹³		32,51		32,51	

Explanation table 2.

1. Dairy farmers receive this bonus (1 cent per liter) for participation in the national animal health and registration program NASEVA. It is estimated that more than 70% of dairy farmers receive this supplement.

2. Dairy farmers who graze their cows for at least 120 days and at least 6 hours a day receive an outdoor grazing premium of € 1.50 per 100 kg of milk. This premium is partly funded by a deduction of € 0.35 per 100 kg for all milk suppliers. Divided over all milk in 2018 an average premium was paid of € 0.63 per 100 kg.

Foqus planet is the quality and sustainability program of FrieslandCampina. The amount of the Foqus planet bonus per individual dairy farmer depends on the extent to which the various requirements are met. These payments are financed from a deduction from all milk and paid penalties. On average, the bonus is therefore zero.

3. Arla dairy farmers receive a quantity bonus from 1.6 million kg per year.

4. Dairy farmers receive a premium of € 1.00 per 100 kg for participating in the quality and sustainability program Arlagården Plus. Assuming that (almost) all Danish dairy farmers meet the criteria, this premium is fully included in the calculated milk price.

5. From 500,000 kg per year, dairy farmers receive a quantum bonus, which can amount to € 1.66 per 100 kg corresponding with a milk production per year greater than 1,750,000 kg.

6. The calculated sustainability premium of Royal A-ware consists of a sustainability premium of € 0.50 plus a calculated average outdoor grazing premium of € 0.81 and a premium of € 0.50 for switching to new milk flows. This last premium of € 0.50 was paid out in the months of October through December 2018 or an average of € 0.13 per year.

7. From 2019, dairy farmers can receive a premium of € 0.1 per 100 kg for participating in the La Route du Lait (LRDL) sustainability program.

8. Premium for participation in the national sustainability program "La Charte des Bonnes Pratiques d'Elevage" (CBPE).

9. As of July 2018, Hochwald abolished the quantity surcharge. On average, it was 2018€ 0.51 per 100 kg at 1 million kg per year.

10. From 2019, dairy farmers who meet the requirements of the Hochwald Milchplus sustainability program will receive a bonus of € 1.00 per 100 kg.

11. Under the Milkmaster program, dairy farmers can score a maximum of 100 points and receive a corresponding premium of € 1.00 per 100 kg. Divided over all milk, an average premium of € 0.59 per 100 kg was paid in 2016.

12. A seasonality premium of € 3.46 per 100 kg was paid in February. Distributed over all milk in 2018, this is € 0.13 per 100 kg.

13. A premium of € 0.10 per 100 kg is paid for participation in the national SDAS program (Sustainable Dairy Assurance Scheme). Almost all Irish dairy farmers participate in this.

14. The monthly seasonality deductions and premiums are zero for a whole year.

15. The seasonality bonuses of € 4.03 and € 2.01, respectively, paid in February and November, spread over all milk in 2018 correspond to € 0.24 per 100 kg.

Not included:

A. The bonuses for GMO-free milk (€ 1.00 per 100 kg) and the bonus for the special milk flow based on the national certification scheme "On the way to PlanetProof" (€ 1.00 per 100 kg).

B. The premium for GMO-free milk of € 1.00 per 100 kg of milk.

C. In addition to the basis milk flow, Royal A-ware also has other milk flows, including a special milk flow for supermarket chain Albert Heijn with a premium of € 3.00 per 100 kg in 2018.

D. The premium for GMO-free milk of € 0.75 (from 2019 € 1.00) per 100 kg of milk.

E. The premium for GMO-free milk of € 1.00 per 100 kg of milk. All dairy farmers receive this premium.

Annex I Milk prices 2011 to 2018

		Av.	2011	2012	2013	2014	2015	2016	2017	2018
Hämeenlinnan Osuusmeijeri	FI	44.61	43.28	44.06	45.18	45.91				
Granarolo (North)	IT	40.27	40.50	40.83	41.97	44.77	39.02	36.93	39.81	38.36
FrieslandCampina	NL	37.00	37.74	35.60	41.42	41.61	33.69	31.27	38.56	36.07
Valio	FI	36.15					36.03	35.21	36.64	36.74
DOC Cheese	NL	35.19	37.59	34.13	39.70	37.25	27.27			
Arla Foods DK	DK	34.94	35.55	34.62	38.75	39.57	30.66	28.44	36.46	35.48
Sodiaal (Pas de Calais)	FR	34.54	34.56	33.78	36.34	38.42	33.41	30.48	34.37	34.93
Danone (Pas de Calais)	FR	34.48	34.55	33.66	35.99	37.95	33.07	31.57	34.47	34.55
First Milk	UK	34.12	30.28	33.52	35.04	37.62				
Savencia (Basse Normandie)	FR	34.02	34.34	33.48	35.94	38.32	32.69	29.78	33.93	33.69
Dairy Crest (Davidstow)	UK	33.93	32.10	35.50	36.85	39.81	34.85	27.03	32.65	32.67
Lactalis (Pays de la Loire)	FR	33.65	34.17	32.82	35.42	37.83	31.82	29.60	33.55	33.98
Royal A-ware	NL	33.46						27.30	37.95	35.13
Milcobel	BE	33.22	34.55	31.01	39.07	36.56	28.85	27.29	35.75	32.72
Müller (Leppersdorf)	DE	32.93	35.14	31.32	37.43	36.68	28.26	26.20	35.38	33.02
DMK	DE	32.56	34.12	31.31	37.14	36.88	27.52	24.96	35.65	32.91
Kerry Agribusiness	IE	32.18	33.61	30.45	37.31	36.15	28.29	24.84	34.31	32.51
Glanbia	IE	31.90	34.14	30.90	37.63	36.11	26.58	22.99	34.31	32.59
Hochwald Milch eG	DE	31.32					31.30	26.14	34.08	33.74
Dairygold	IE	29.87					27.85	24.62	34.26	32.75
Average		34.52	35.39	34.19	38.20	38.84	31.24	28.51	35.42	34.23
Emmi	CH	50.07	48.72	46.80	49.82	51.69	53.35	50.02	51.88	48.25
Fonterra	NZ	29.26	30.15	29.99	35.54	28.71	21.05	27.62	31.63	29.40
USA class III	US	34.79	32.70	33.36	33.28	41.47	35.82	33.99	36.22	31.49

Annex II Average currency exchange rates 2018 and 2017

Exchange rate of the euro	2018	2017	2018/2017
Danish crown	7.453175	7.438658	-0.2%
New-Zealand dollar	1.705850	1.589483	-7.3%
British pound	0.884758	0.876149	-1.0%
US dollar	1.181517	1.129292	-4.6%
Swiss franc	1.154883	1.111558	-3.9%

Annex III Milk prices 2018 and 2017 500,000 kg standard milk per year

Company	Country	2018	2017	2018-2017	2018/2017	National currency
Granarolo (North)	IT	38.36	39.71	-1.35	-3.4%	
Valio	FI	36.74	36.64	0.10	0.3%	
FrieslandCampina	NL	35.95	38.44	-2.50	-6.5%	
Arla Foods DK	DK	35.41	36.29	-0.88	-2.4%	-2.2%
Sodiaal (Pas de Calais)	FR	34.93	34.37	0.55	1.6%	
Danone (Pas de Calais)	FR	34.55	34.47	0.08	0.2%	
Royal A-ware	NL	33.85	36.67	-2.82	-7.7%	
Lactalis (Pays de la Loire)	FR	33.84	33.41	0.43	1.3%	
Savencia (Basse Normandie)	FR	33.69	33.93	-0.24	-0.7%	
Hochwald Milch eG	DE	33.59	33.82	-0.22	-0.7%	
Müller(Leppersdorf)	DE	32.92	35.28	-2.36	-6.7%	
DMK Deutsches Milchkontor eG	DE	32.75	35.49	-2.74	-7.7%	
Dairygold	IE	32.75	34.26	-1.51	-4.4%	
Glanbia	IE	32.59	34.31	-1.72	-5.0%	
Kerry Agribusiness	IE	32.51	34.31	-1.80	-5.3%	
Dairy Crest (Davidstow)	UK	32.34	32.31	0.02	0.1%	1.1%
Milcobel	BE	32.19	35.32	-3.13	-8.8%	
Average		34.06	35.24	-1.18	-3.4%	
Emmi	CH	48.08	51.71	-3.63	-7.0%	-3.1%
Fonterra	NZ	29.40	31.63	-2.24	-7.1%	0.3%
USA class III	US	31.49	36.22	-4.73	-13.1%	-8.4%

Annex IV Milk prices 2018 and 2017 1,500,000 kg standard milk per year

Company	Country	2018	2017	2018-2017	2018/2017	National currency
Granarolo (North)	IT	38.36	39.91	-1.54	-3.9%	
Valio	FI	36.74	36.64	0.10	0.3%	
FrieslandCampina	NL	36.11	38.60	-2.50	-6.5%	
Arla Foods DK	DK	35.51	36.52	-1.01	-2.8%	-2.6%
Royal A-ware	NL	35.42	38.25	-2.82	-7.4%	
Sodiaal (Pas de Calais)	FR	34.93	34.37	0.55	1.6%	
Danone (Pas de Calais)	FR	34.55	34.47	0.08	0.2%	
Lactalis (Pays de la Loire)	FR	33.98	33.55	0.43	1.3%	
Hochwald Milch eG	DE	33.74	34.09	-0.35	-1.0%	
Savencia (Basse Normandie)	FR	33.69	33.93	-0.24	-0.7%	
DMK Deutsches Milchkontor eG	DE	33.05	35.79	-2.74	-7.7%	
Müller (Leppersdorf)	DE	33.02	35.38	-2.36	-6.7%	
Milcobel	BE	32.96	35.99	-3.03	-8.4%	
Dairy Crest (Davidstow)	UK	32.89	32.87	0.02	0.1%	1.0%
Dairygold	IE	32.75	34.26	-1.51	-4.4%	
Glanbia	IE	32.59	34.31	-1.72	-5.0%	
Kerry Agribusiness	IE	32.51	34.31	-1.80	-5.3%	
Average		34.28	35.48	-1.20	-3.4%	
Emmi	CH	48.42	52.06	-3.64	-7.0%	-3.1%
Fonterra	NZ	29.40	31.63	-2.24	-7.1%	0.3%
USA class III	US	31.49	36.22	-4.73	-13.1%	-8.4%