

LTO International comparison of producer prices for milk

2019

*prezzi di latte • melkprijzen • prix du lait • molkeprizen
milch preise • milk prices • maelke priser • maidon hinnat*

COLOPHON

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¹ In this revised version Annex I has been corrected

Table of contents

| | |
|--|----|
| Foreword | 3 |
| 1. Introduction and notes for readers | |
| 1.1 Introduction, method and assumptions | 4 |
| 1.2 Notes for readers | 5 |
| 2. Milk prices in 2019 | |
| 2.1 Milk price comparison | 6 |
| 2.2 Milk price developments outside the European Union | 9 |
| 2.3 Dairy market prices in 2019 | 11 |
| 3. Milk price and market developments in the first half of 2020 | 12 |
| 4. Explanation of the of calculated milk prices | |
| 4.1 Premiums for sustainability and special milk flows | 13 |
| 4.2 Explanation per company | 13 |
| Annex I Milk prices 2010 to 2019 | 17 |
| Annex II Average currency exchange rates 2019 and 2018 | 17 |

Foreword

It is now a tradition for ZuivelNL to carry out an international milk price comparison on behalf of LTO Nederland each year. It is important to Dutch dairy farmers to have insight into the milk price and, as advocates, we see it as our job to give substance to this. We want to have a picture not only of the trend, which is of course also important, but also of how the milk price relates to the prices paid by companies in our neighboring countries.

Last year was relatively quiet in terms of pricing. Especially towards the end of the year the prices of the components rose, not steeply but steadily. This was fueled by the fact that the last stocks from the 2016 intervention had already been put on the market so there was hardly any stock that could disrupt the market. Consumption increased slightly, while production virtually stabilized globally. All together, this resulted in a friendly market, price increases and a positive outlook for the near future. Which is sorely needed, as the costs on dairy farms are rising and it is becoming increasingly difficult for dairy farmers to offset the increase in cost price with economies of scale.

Sustainability is a theme that is now embedded in the dairy chain and at farm level. Prompted by the market and society, we have made significant strides in dairy farming over the past decade. We now know that sustainability efforts sometimes go hand in hand with cost increases. This is why the earnings model has also been included in the new objectives of the Dutch Sustainable Dairy Chain. Through the Sustainable Dairy Chain, dairy organizations and dairy farmers in the Netherlands work together towards a dairy sector that is future-proof and responsible. In the first place the earnings model is added to gain insight in costs and/or savings but also to make it worthwhile for farmers to increase their sustainability. Sustainability can only be tenable for the long term if the farmer also benefits in economic terms.

There is enormous diversity among the farmers and businesses in the dairy farming industry. Government policy sometimes seems to have the aim of funneling the sector towards a certain type of farming. But it is precisely this diversity that provides opportunities to make a sectoral contribution to improving the environment on various themes. This includes climate, nitrogen issues and biodiversity.

Dairy companies respond to this by setting up different milk flows in order to add value to environmental objectives in the market. Good initiatives, whereby LTO Dairy Committee decided for the first time this year to compare different milk flows in the Netherlands. Not to indicate what is good or bad or to set dairy processors against each other, but to give dairy farmers insight into the potential and possibilities that a certain milk flow can mean for them. Here, too, we expect to meet a need.

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 by ZuivelNL 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 ("13th month 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 2018 and 2019 monthly milk prices is based on the average of the monthly deliveries in 2018 and 2019.

The present publication comprises the milk prices calculated for the calendar year 2019.

1.2 Notes for readers

Chapter 2 features the calculated milk prices for 2019 (paragraph 2.1), followed by the milk price developments outside the EU (2.2) and the dairy market prices in 2019 (2.3).

In chapter 3 trends of milk prices and dairy markets in the first half of 2020 are described.

In chapter 4 additional information is provided about the calculated milk prices. After a description of how the premiums for sustainability and special milk flows were dealt with (paragraph 4.1), the calculated milk prices per dairy company are explained in 4.2.

The appendices give an overview of milk prices per dairy company from 2010 to 2019 (Annex I) and the average currency exchange rates in 2018 and 2019 (Annex II).

2. Milk prices in 2019

2.1 Milk price comparison

In 2019 the milk prices of EU dairy companies decreased by an average of € 0.16 or 0.5% compared with the previous year, to € 34.06 per 100 kg of standard milk (table 1). As such, 2019 was once again an average year in terms of milk prices (see graph 1). The price trend during the year was notable, however, due to the relatively small variation in monthly milk prices (see graphs 5 and 6).

Table 1. Milk prices 2019 and 2018

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

| Company | Country | 2019 | | 2018 | | 2019-2018 | 2019/2018 | National currency |
|------------------------------|---------|--------------|----|--------------|----|--------------|--------------|-------------------|
| Granarolo (North) | IT | 39.24 | 1 | 38.37 | 1 | 0.87 | 2.3% | |
| FrieslandCampina | NL | 36.49 | 2 | 36.07 | 3 | 0.42 | 1.2% | |
| Valio | FI | 36.46 | 3 | 36.74 | 2 | -0.29 | -0.8% | |
| Sodiaal (Pas de Calais) | FR | 35.50 | 4 | 34.89 | 5 | 0.62 | 1.8% | |
| Savencia (Basse Normandy) | FR | 35.17 | 5 | 33.69 | 9 | 1.48 | 4.4% | |
| Danone (Pas de Calais) | FR | 35.04 | 6 | 34.55 | 6 | 0.48 | 1.4% | |
| Lactalis (Pays de la Loire) | FR | 34.89 | 7 | 33.98 | 8 | 0.91 | 2.7% | |
| Hochwald Milch eG | DE | 34.37 | 8 | 34.41 | 7 | -0.04 | -0.1% | |
| Arla Foods DK | DK | 34.02 | 9 | 35.50 | 4 | -1.47 | -4.2% | -4.0% |
| Müller (Leppersdorf) | DE | 33.46 | 10 | 33.02 | 10 | 0.44 | 1.3% | |
| Saputo Dairy UK | UK | 32.92 | 11 | 32.66 | 14 | 0.26 | 0.8% | -0.1% |
| Milcobel | BE | 32.36 | 12 | 32.75 | 13 | -0.40 | -1.2% | |
| DMK Deutsches Milchkontor eG | DE | 32.33 | 13 | 32.96 | 11 | -0.63 | -1.9% | |
| Kerry Agribusiness | IE | 31.04 | 14 | 32.51 | 16 | -1.47 | -4.5% | |
| Dairygold | IE | 30.89 | 15 | 32.76 | 12 | -1.87 | -5.7% | |
| Glanbia | IE | 30.76 | 16 | 32.59 | 15 | -1.83 | -5.6% | |
| Average milk price | | 34.06 | | 34.22 | | -0.16 | -0.5% | |
| Capsa Food | ES | 31.14 | | | | | | |
| Emmi | CH | 51.60 | | 48.23 | | 3.36 | 7.0% | 3.2% |
| Fonterra | NZ | 31.19 | | 29.01 | | 2.12 | 7.5% | 7.1% |
| USA class III | US | 38.16 | | 31.49 | | 6.67 | 21.2% | 15.6% |

Compared with last year, the table is missing the milk price of Dutch Royal A-ware and the milk price of Spanish Capsa Food has been added. This latter has been included because of the need for more insight into milk prices in southern Europe. To ensure that the series is not distorted, the Capsa Food milk price has not yet been included in the average milk price.

It must be pointed out that the decline in price in 2019 also remained limited because the (average) premiums for GMO-free milk (or VLOG milk)¹ have been factored into the calculated milk prices from 2019. Without these premiums, the average milk price would have decreased not by € 0.16, but by

¹ GMO-free milk comes from dairy farms where there are no genetically modified organisms in the feed. VLOG (Verband Lebensmittel Ohne Gentechnik) is a German association responsible for the certification and issue of the 'Ohne Gentechnik' label.

€ 0.30 per 100 kg. In addition, the effect of this change is only visible in the milk prices of the German companies (for further explanation, see chapter 4).

Italian **Granarolo** is again at the top of this milk price list. The milk price rose by € 0.88 per 100 kg.

Thanks to the higher supplementary payment, **FrieslandCampina's** milk price in 2019 rose compared to last year.

Valio's milk price fell by € 0.28 slightly more than the average.

French milk prices rose the most in 2019. The French system of contracts with contracted quantities and price indexations evidently also had a positive influence on the milk price in 2019.

Arla's milk price and, as a result, its position in the ranking fell in 2019. This is partly due to the lower supplementary payment. For 2018, Arla made a one-off payment of all the profits to the members, while the regular share of the profit on the milk delivered in 2019 was retained and added to the general reserve.

From 2019, **German** milk prices include the (average) bonuses for GMO-free milk. If these premiums had not been included in the calculations, the milk prices of Hochwald, Müller and DMK would have been € 0.89, € 0.99 and € 0.53 lower per 100 kg of milk, respectively.

The calculated milk price of **Saputo Dairy UK** - formerly Dairy Crest - rose expressed in euros because the value of the British pound has risen against the euro.

Milcobel's milk price fell slightly more than the average.

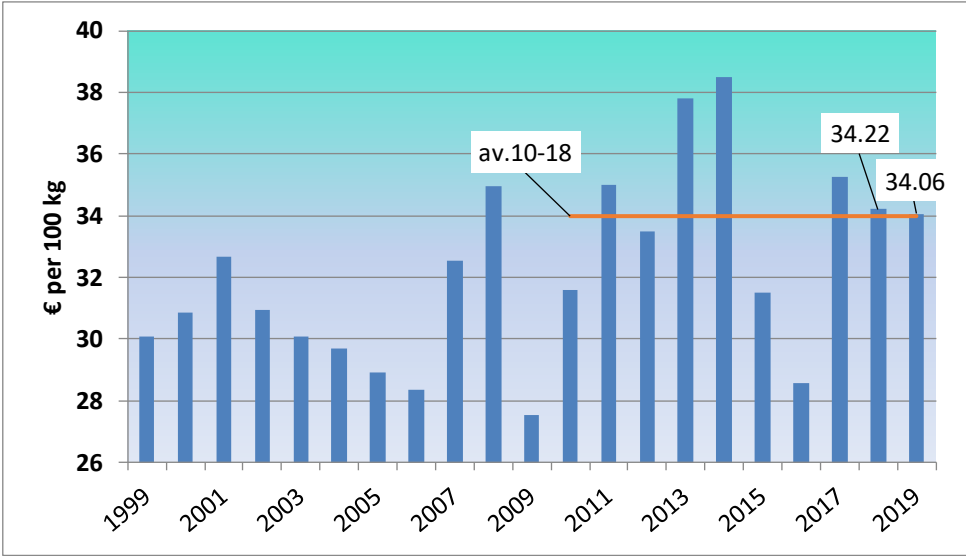
Just as last year, **Irish** milk prices came in at the bottom of the ranking, but the gap with the other European dairy companies has clearly widened.

Spanish **Capsa Food** was added to the milk price comparison recently, which is why no milk price could be calculated for 2018. The milk price is below the European average.

Outside the EU milk prices did not fall, but instead rose (sharply). Most striking is the large increase in the United States. It should be noted, however, that milk prices in the US were relatively low in 2018.

Graph 1 shows that the milk price in 2019 was about the same as the average for the years 2010 to 2018. As such, just like last year, 2019 was an average year for milk prices.

Graph 1. Average milk prices from 1999 to and including 2019



2.2 Milk price development outside the European Union

Emmi

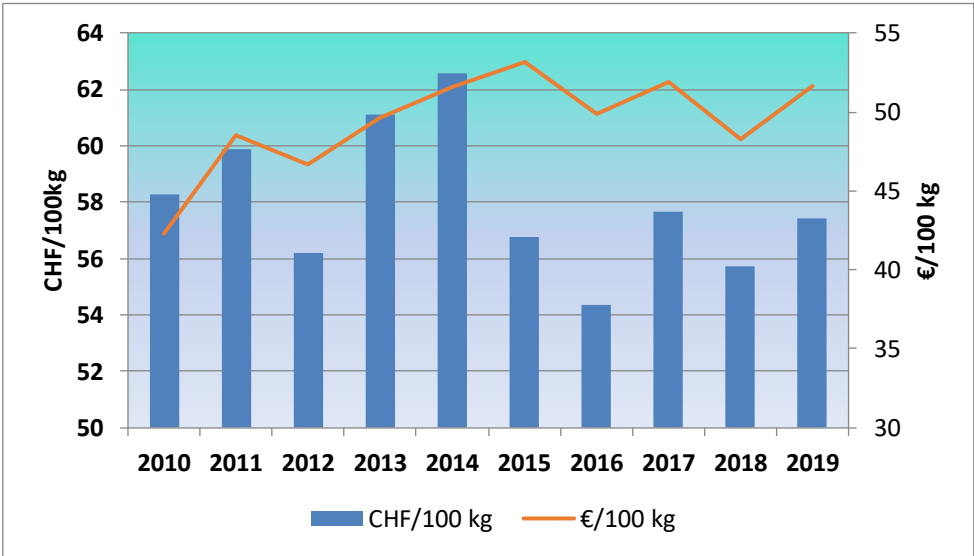
The milk price rose by 7.0% to € 51.60 per 100 kg. Expressed in national currency, the increase was about half.

The calculated milk price relates to dairy farmers who supply Emmi via a producer organization and consists of a weighted average of the A and B base prices. The A price is based on the price development of dairy products with market protection and high added value, while the lower B price applies to products with lower added value and less market protection.

For the A and B quantities of milk, a fixed ratio of 66:34 applied in 2018 and 2019 regardless of the total quantity of milk supplied.

The calculated milk price excludes a supplement of 3 CHF (approx. € 2.75) per 100 kg of milk for participation in the national sustainability programme ‘Swissmilk green’. The milk is produced under the Suisse Guarantee label, which means, among other things, that no GMO feed is used.

Graph 2. Milk prices Emmi 2010 until 2019 (CHF and € per 100 kg standard milk)



Fonterra

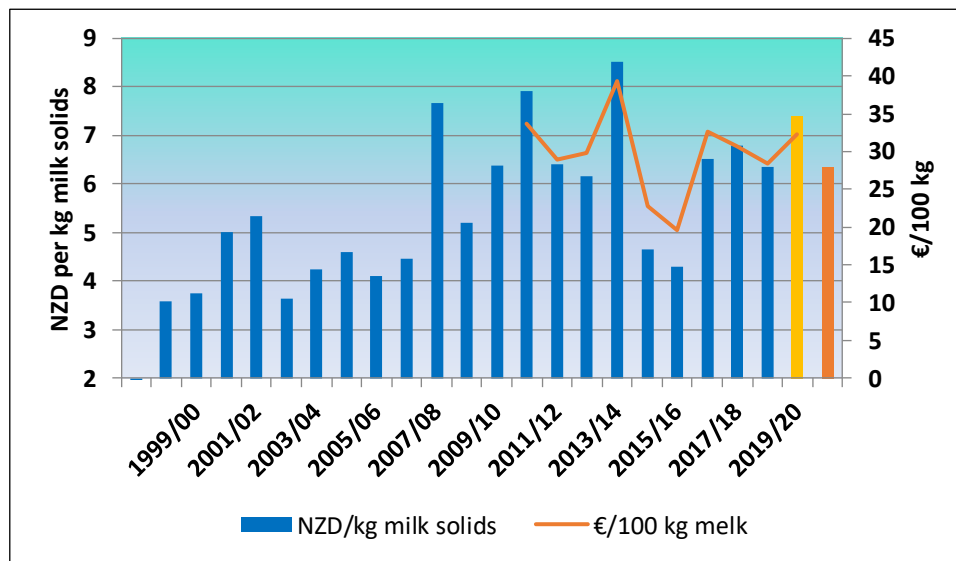
Converted to the calendar year and expressed in euros per 100 kg of standard milk, the calculated milk price was € 31.19 per 100 kg in 2019.

For the current milk price year 2019/20 - which runs from June 2019 to May 2020 inclusive - a milk price including dividend is expected of 7.40 NZD per kg of milk solids ((ms), i.e. fat plus protein) or € 31.44 per 100 kg of standard milk (exchange rate May 2020). A clear increase compared to the previous season 2018/19 with a final milk price of 6.35 NZD per kg ms. For the new season, an opening milk price of 6.15 (margin 5.4 - 6.9) plus dividend (assumed) of 0.2 or a total of 6.35 NZD per kg ms applies. The large range in the milk price forecast reflects the uncertainty about market developments in the coming year.

Fonterra publishes updates of the forecast milk price throughout the year and the final milk price is released together with the annual results in September.

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

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

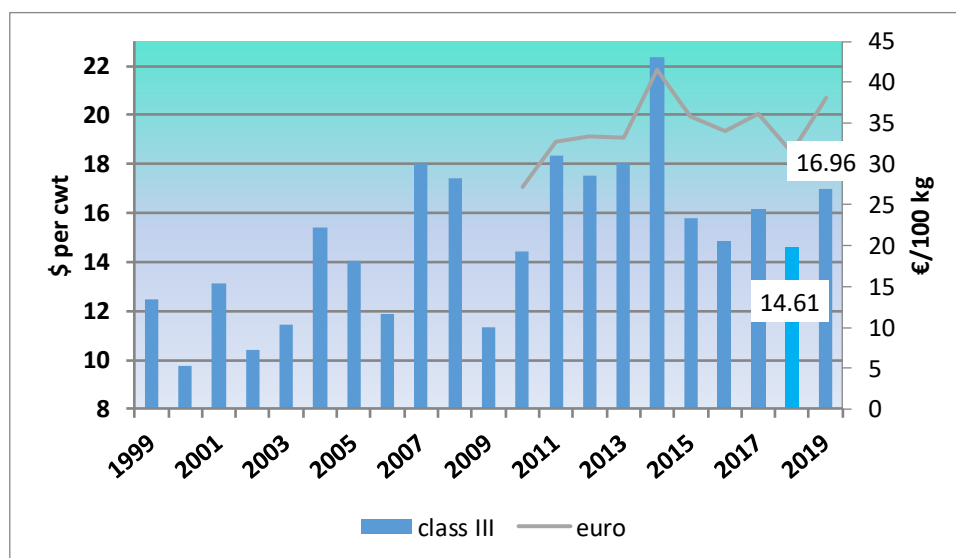


United States

After the poor milk price year of 2018, milk prices in the United States rose sharply last year. The class III milk price expressed in dollars per cwt² rose, converted, to € 38.16 per 100 kg of standard milk and is thus well above the EU average. It must be noted, however, that this is partly because the milk prices in dollars are converted into euros and the exchange rate of the euro has clearly fallen against the dollar in recent years.

In the American milk marketing orders, the government publishes milk prices for different classes of milk, depending on the utilization and the selling price of dairy products. Most American milk is processed into cheese, which is why the class III price was chosen as an indicator for the development of the US milk prices. Taking other sales categories into account, dairy farmers in the US will receive on average a slightly higher milk price.

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



² A hundredweight (cwt) is 45.36 kg.

2.3 Dairy market prices in 2019

The EU milk supply in 2019 was 0.6% higher than in 2018. Globally, the milk supply in the main exporting countries hardly increased in 2019 (+0.1%).

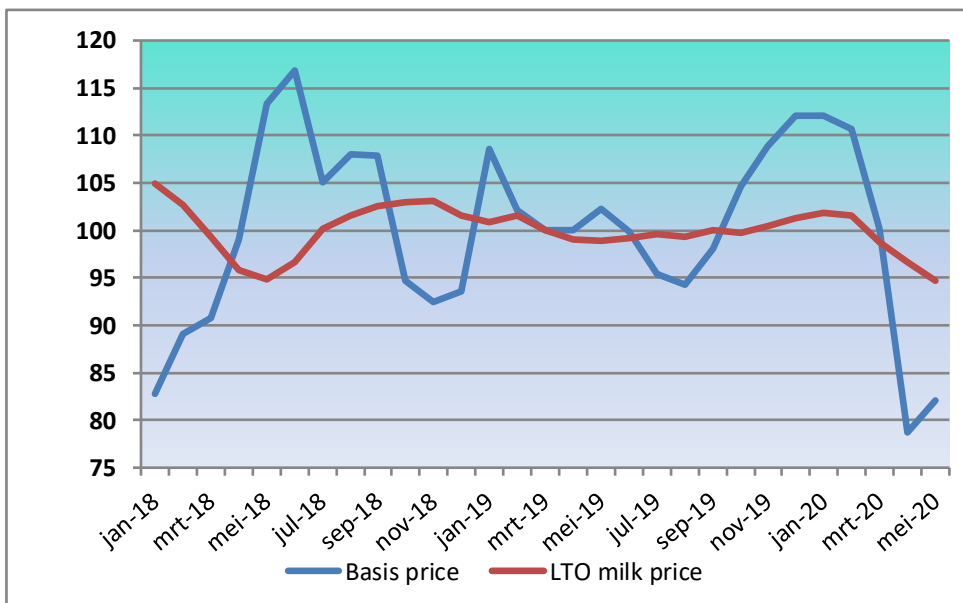
The dairy market was dominated in 2019 by the strong recovery in protein prices. Thanks to the complete reduction of intervention stocks, skimmed milk powder was once again subject to the normal supply and demand mechanism. Butter fat prices, on the other hand, were under pressure for much of the year and fell further. This price decline had already started during the second half of 2018.

Ultimately, the average price level of protein-related products in 2019 was considerably higher than in 2018. The average Dutch price quotation for skimmed milk powder rose by more than 43%. In the case of whole milk powder, the increase in the protein component had more of an effect than the decrease in the fat component. As a result, the average price quotation for whole milk powder increased by more than 9% in 2019. The average price of butter fell by almost 24%. Average prices of cheese and whey powder rose by 2% and 1%, respectively, in 2019.

The price quotations for butter and skimmed milk powder do not determine milk prices because the milk prices paid by dairy companies depend on, among other factors, a much wider range of products and the corresponding sale prices. The trend in butter and skimmed milk powder prices does, however, give an indication of the development in milk prices. Earlier analyses (see the report on milk prices 2017) appear to show a connection, with milk prices following the price quotations with a delay of a few (2 to 3) months but clearly fluctuating less.

Graph 5 shows the development of the average LTO milk prices of EU companies compared to the calculated basis price for milk based on the ZuivelNL price quotations for butter and skimmed milk powder. Both are indexed at March 2019 = 100.

Graph 5. Development of monthly LTO milk prices and basis price for milk based on price quotations of butter and skimmed milk powder (Index March 2019 = 100)



Graph 5 shows that the rise in calculated prices based on butter and skimmed milk powder prices in the autumn of 2019 was not yet reflected in the development of milk prices. It also seems that in the 'Corona crash' at the beginning of 2020, there was a rapid, virtually parallel reaction of the milk price paid to producers.

3. Milk price and market developments in the first half of 2020

After a relatively quiet period with flat prices in the months November to January, the Dutch price quotations for butter and skimmed milk powder came under pressure from February onwards as a result of the Coronavirus crisis, which led to a drop in demand and logistical problems. These decreases continued until mid-April.

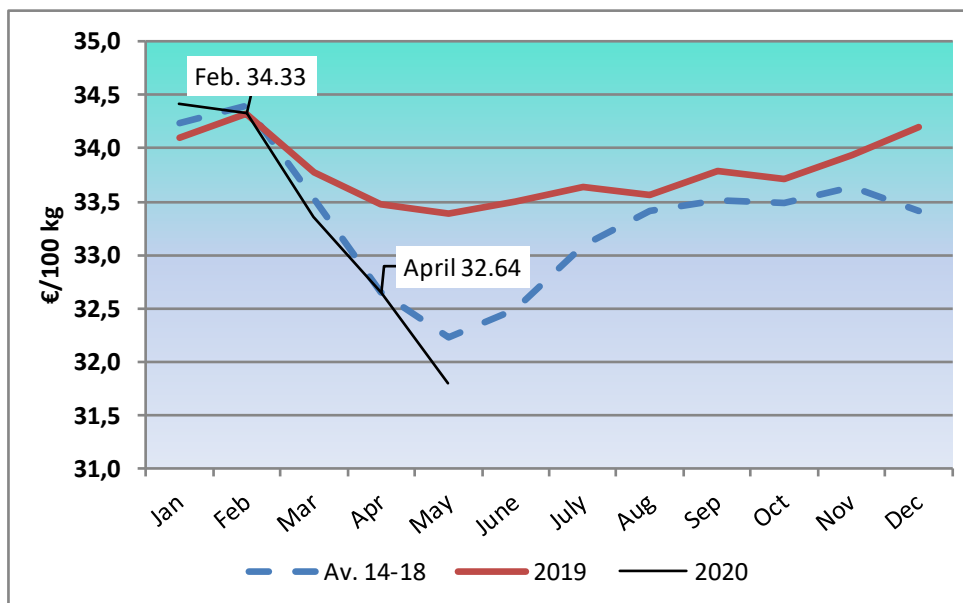
Butter prices rose again sharply in May and early June. This was caused by an upturn in demand due to the still relatively lower price level, the reopening of the hospitality sector, higher cream prices and the activation of private storage.

The price quotation for skimmed milk powder also rose in May and early June, although not as much as for butter. Demand was better than expected, which again widened the distance to the intervention price level, and the price had in fact already reached the level of the long-term average.

Milk prices have also fallen markedly since March. Although the Coronavirus outbreak played a role in this, a fall in prices during this period is not uncommon. This can be seen from a comparison of the monthly prices in 2020 with the average milk prices of the previous 5 years (2014 to 2018, inclusive).

The fall in prices probably felt more of a blow because milk prices were expected to improve thanks to positive market and milk price forecasts at the beginning of the year (see also graph 5).

Graph 6. Development of average monthly milk prices up to and including May 2020
May forecast



4. Explanation of the calculated milk prices

4.1 Premiums for sustainability and special milk flows

An increasing number of milk price bonuses, especially for sustainability and special milk flows, make it more difficult to compare representative milk prices. At the same time, however, this also increases the need for transparency.

Almost all dairy companies have sustainability programmes that involve the payment of bonuses. These can be fixed bonuses for participation or variable depending on the scores for the various components. The sustainability premiums are aimed at ensuring that all milk is produced more sustainably. This is why the average bonuses paid are - to the extent known - factored into the calculated milk prices. If not enough information is known, the entire premium is included if it is plausible that the vast majority of the dairy farmers receive this premium. In the case of limited scope, these premiums are not taken into account.

It is indicated for each company which amounts have or have not been included in the calculated milk prices (see table 2). After all, the aim of the LTO International Milk Price Comparison is transparency.

All dairy companies have several milk flows, with the milk being collected and processed separately. That is nothing new. For decades there have been separate milk flows for, for example, organic milk or milk processed into EU-protected (regional) products. Some dairy companies have dozens of different milk flows, with dairy farmers receiving a bonus on the milk price (or a higher milk price). For the milk price comparison - focused on the primary milk flow - the flows of milk which have become (almost) standard because of their size are the most relevant. In concrete terms, this currently concerns the GMO-free milk flow (or VLOG milk) in Germany and outdoor grazing milk in the Netherlands.

The next section explains the structure of the milk price per company; a summary is provided in the concluding table.

4.2 Explanation per dairy company

The **Granarolo** group consists of the owner, 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 based on the payment by Granarolo. The milk price received by the individual dairy farmers may deviate from this because of a different breakdown (via premiums/discounts) or additional payments or supplementary payments by the cooperative. The basis, however, is the milk money paid by Granarolo.

FrieslandCampina's milk price includes a supplementary payment of € 1.31 (2018: € 0.57). The supplementary payment consists of a cash performance bonus of € 1.02 and a registered reserve (members' bonds) of € 0.29 per 100 kg of standard milk.

Because the premiums for the quality and sustainability programme Foqus planet are financed by amounts withheld, the average bonus is nil. The milk price includes an (average) bonus of € 0.65 (2018: € 0.63) per 100 kg for the outdoor grazing milk flow³. 82% of Dutch dairy farmers receive an outdoor grazing premium. In view of the relatively limited size of the GMO-free milk flow (approx.

³ Dairy farmers who graze their cows for at least 120 days and at least 6 hours a day receive an outdoor grazing premium.

5%), no (average) bonus for VLOG milk has been included in the calculated milk price. The same applies for milk flows that satisfy the 'On the way to planet proof' quality mark.

The calculated milk price of top cooperative **Valio** is based on one of the Finnish member dairy cooperatives, which has all milk processed and marketed by Valio, and includes a supplementary payment of € 1.07 (2018: € 1.02) per 100 kg of standard milk.

The milk price includes a bonus of € 1.94 per 100 kg (2 cents/litre) for participation in the national animal health and registration programme NASEVA.

The calculated milk price of **Sodiaal** is based on the so-called A price and includes a provisional supplementary payment of € 0.19 per 100 kg of milk. Because the supplementary payment for the milk delivered in 2019 will not be known until June, it is provisionally assumed that the same supplementary payment as last year will be paid.

With the exception of the months of August, September and October, the A price applies to a limited quantity of milk, specifically a maximum of 7.5% of the predetermined annual quantity. If more milk is delivered in those nine months, then the B price is received for the extra milk. The monthly A price depends on the dairy companies' product range and indicators of price developments on the dairy market. Some French companies also include the development of the cost price in this. The B price is based on the price development of the base products of butter and skimmed milk powder. In 2018 and 2019, the B price was always lower than the A price.

Assuming a standard delivery pattern and a monthly weighted average A and B price taking into account the maximum quantities of A, the calculated milk price of Sodiaal fell by € 0.22 per 100 kg in 2019 (2018: minus € 0.37).

La Route Du Lait (LRDL) is Sodiaal's sustainability programme. Dairy farmers receive a premium of € 0.10 per 100 kg for participation.

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

Danone's milk price is based on a contract whereby 50% of the A milk price is determined by market indicators and 50% by cost price developments at dairy farms.

As is the case at Sodiaal, the milk price calculated is based on just the A price. Different maximum A quantities per month apply at Danone, however, specifically 8.5%, except in the months of May (9.5%) and June to October, inclusive (12%). Because of these broader limits for A milk, the effect of including the B price (as in the case of Sodiaal, based on the price development of butter and skimmed milk powder) in the calculated milk price is limited, specifically minus € 0.03 in 2019 and minus € 0.07 in 2018.

The milk price of **Lactalis** includes a premium of € 0.07 per 100 kg for participation in the national programme Carte des Bonnes Pratiques d'Élevage (CBPE).

Hochwald Milch eG's milk price includes a provisional supplementary payment of € 0.69 per 100 kg, assuming that this is equal to the supplementary payment for 2018. In addition, the milk price also includes the average bonuses for the sustainability programme MilchPlus (€ 0.69 per 100 kg milk) and the premium for GMO-free milk (€ 0.89 per 100 kg milk). From 2020, (almost) 100% of the milk will be GMO-free.

The **Arla** milk price concerns the Danish members. In principle, all member dairy farmers are paid in the same way, but some bonuses may be distributed differently between countries.

The calculated milk price includes a supplementary payment of € 1.43 per 100 kg of milk, consisting of a cash portion and an amount in members' certificates. The previous supplementary payment for the milk delivered in 2018 was significantly higher (€ 2.30 per 100 kg), but this was because, as an

exception, the profit was paid in full to the member dairy farmers because of the bad weather conditions.

The calculated milk price includes a bonus of € 0.99⁴ per 100 kg for participation in the quality and sustainability programme Arlagarden plus. The bonus for GMO-free milk is not included because only a limited percentage (approx. 25%) of Danish dairy farmers receive this bonus (€ 1.00 per 100 kg).

Müller's milk price relates to a producer group that delivers the milk to the Müller factory in Leppersdorf and includes a provisional supplementary payment of € 0.50 per 100 kg (2018: € 0.67). The amount of the supplementary payment depends on the difference between the milk prices paid monthly and an agreed reference price.

From 2019, all milk supplied will be GMO-free. A premium of € 0.99 per 100 kg of milk has therefore been included in the milk price.

After the acquisition by the Canadian Saputo, the name Dairy Crest was changed to **Saputo Dairy UK**. The milk price still concerns dairy farmers who supply the cheese factory in Davidstow. The Saputo milk price was the most constant of all milk prices in 2019. Only once - in February - was the price changed. Monthly variations were due to pre-agreed seasonal levies and premiums.

It is provisionally assumed that **Milcobel** will not make a supplementary payment in 2019. The supplementary payment for 2018 was € 0.24 per 100 kg.

The milk price of **Deutsches Milchkontor eG** (DMK) includes bonuses for sustainability and GMO-free milk of € 0.66 and € 0.54 per 100 kg, respectively. According to the 2018 annual report, the average bonus for the Milkmaster sustainability programme was € 0.66 per 100 kg. The average bonus for GMO-free milk is based on a premium of € 0.90 per 100 kg and an estimate that 60% of the milk is GMO-free.

The calculated milk price of **Kerry Agribusiness** includes a bonus of € 0.10 for participation in the national sustainability programme SDAS (Sustainable Dairy Assurance Scheme). This applies for the milk price of **Dairygold** as well.

Glanbia's milk price concerns the milk supplied to Glanbia Ingredients Ireland Limited (GILL) by the members of the Glanbia cooperative. GILL is a joint venture between the cooperative Glanbia (60%) and the listed Glanbia plc (40%). Despite a majority shareholding on the part of the cooperative, GILL operates as a private for-profit company. However, a large part of this profit is distributed via the cooperative to the member dairy farmers as supplements to the milk price. So a supplementary payment ('trading bonus') of € 0.36 per 100 kg (2018: € 0.40) is included in the calculated milk price.

Capsa Food is owned by the Central Lechera Asturiana cooperative and processes around 0.9 billion kg of milk annually, the vast majority of which comes from dairy farmers in north-western Spain. Capsa Food is the next largest dairy processor in Spain after Lactalis.

Capsa Food's milk price consists of an A and B price. The A price - for 70% of the milk delivered - is fixed quarterly, while the B price (for the remaining 30% of the milk) is based on market developments for butter and skimmed milk powder, among other things, and therefore varies monthly.

⁴ In Denmark and Germany, 1 litre equals 1.02 kg of milk. Because the milk price comparison is based on 1 litre equalling 1.03 kg, the Danish and German milk prices are multiplied by a factor of 1.02/1.03. As a result, a Danish or German bonus of, for example, 1.00 is 0.99 in this milk price comparison.

Structure of milk prices summarized

Table 2 shows the structure of the different milk prices. The (average) fat and protein prices have also been added to this table in order to give insight into the extent to which the milk price changes with levels higher or lower than the standards of 4.2% fat and 3.4% protein.

Table 2. Structure of milk price calculated 2019
Fat- and protein prices per kg, other in euro per 100 kg milk

| | Butter fat price | Protein price ¹ | Quality | Quantity | Sustainability | Special milk flows | Supplementary payments | Milk price |
|-------------------------------|------------------|----------------------------|---------|----------|----------------|--------------------|------------------------|--------------|
| Granarolo | 2.13 | 4.79 | 0.75 | | | | | 39.24 |
| FrieslandCampina ² | 2.90 | 5.81 | | | | 0.65 | 1.31 | 36.49 |
| Valio | 3.90 | 6.50 | | | 1.94 | | 1.07 | 36.46 |
| Sodiaal | 2.96 | 5.39 | 0.58 | | 0.10 | | 0.19 | 35.50 |
| Savencia | 2.95 | 5.43 | 1.18 | | | | | 35.17 |
| Danone | 2.96 | 5.39 | | | | | | 35.04 |
| Lactalis | 2.60 | 6.60 | | | 0.07 | | | 34.89 |
| Hochwald | 2.50 | 5.00 | 0.76 | | 0.69 | 0.89 | 0.69 | 34.37 |
| Arla Foods DK | 4.00 | 4.40 | 0.90 | | 0.99 | | 1.43 | 34.02 |
| Müller | 2.52 | 4.54 | 0.51 | 0.71 | | 0.99 | 0.50 | 33.46 |
| Saputo Dairy UK | 2.59 | 3.17 | 0.11 | 0.67 | | | | 32.92 |
| Milcobel | 4.02 | 4.02 | 0.73 | 1.13 | | | | 32.36 |
| DMK | 4.10 | 4.10 | | | 0.66 | 0.54 | | 32.33 |
| Kerry | 3.76 | 5.64 | | | 0.10 | | | 31.04 |
| Dairygold | 3.47 | 5.68 | 0.39 | | 0.10 | | | 30.89 |
| Glanbia | 3.24 | 5.83 | | | | | 0.36 | 30.76 |
| Capsa Food | 2.70 | 3.75 | | | | | | 31.14 |
| Emmi | 1.80 | 6.29 | | | | | | 51.60 |
| Fonterra | 4.35 | 4.35 | | | | | | 31.19 |
| VS class III ² | 4.94 | 4.69 | | | | | | 38.16 |

¹ In France and the United States, the protein content is expressed in pure protein and not in crude protein as in most European countries. The French and American protein prices are therefore prices for pure protein. Pure protein equals 0.95 x crude protein.

² FrieslandCampina also pays for the component lactose (average price 2019: € 0.58/kg) and in the US Class III, a value is also assigned to other components ('other solids' average price 2019: € 0.37/kg).

Annex I Milk prices 2010 to 2019 (revised)

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

| | Av. | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|-----------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Granarolo (North) | 39.64 | 35.01 | 40.50 | 40.83 | 41.97 | 44.77 | 39.02 | 36.93 | 39.81 | 38.37 | 39.24 |
| FrieslandCampina | 36.59 | 33.39 | 37.74 | 35.60 | 41.42 | 41.61 | 33.69 | 31.27 | 38.56 | 36.07 | 36.49 |
| Valio | 36.22 | | | | | | 36.03 | 35.21 | 36.64 | 36.74 | 36.46 |
| Arla Foods DK | 34.64 | 32.78 | 35.55 | 34.62 | 38.75 | 39.57 | 30.66 | 28.44 | 36.46 | 35.50 | 34.02 |
| Sodiaal (Pas de Calais) | 34.37 | 31.96 | 34.56 | 33.78 | 36.34 | 38.42 | 33.41 | 30.48 | 34.37 | 34.89 | 35.50 |
| Danone (Pas de Calais) | 34.31 | 32.24 | 34.55 | 33.66 | 35.99 | 37.95 | 33.07 | 31.57 | 34.47 | 34.55 | 35.04 |
| Savencia (Basse Normandy) | 33.92 | 31.85 | 34.34 | 33.48 | 35.94 | 38.32 | 32.69 | 29.78 | 33.93 | 33.69 | 35.17 |
| Lactalis (Pays de la Loire) | 33.58 | 31.69 | 34.17 | 32.82 | 35.42 | 37.83 | 31.82 | 29.60 | 33.55 | 33.98 | 34.89 |
| Saputo Dairy UK | 33.35 | 29.12 | 32.10 | 35.50 | 36.85 | 39.81 | 34.85 | 27.03 | 32.65 | 32.66 | 32.92 |
| Milcobel | 33.05 | 32.34 | 34.55 | 31.01 | 39.07 | 36.56 | 28.85 | 27.29 | 35.76 | 32.75 | 32.36 |
| Müller (Leppersdorf) | 32.78 | 30.93 | 35.14 | 31.32 | 37.43 | 36.68 | 28.26 | 26.20 | 35.38 | 33.02 | 33.46 |
| DMK | 32.37 | 30.80 | 34.12 | 31.31 | 37.14 | 36.88 | 27.52 | 24.96 | 35.65 | 32.96 | 32.33 |
| Hochwald Milch eG | 32.06 | | | | | | 31.30 | 26.14 | 34.08 | 34.41 | 34.37 |
| Kerry Agribusiness | 31.75 | 29.04 | 33.61 | 30.45 | 37.31 | 36.15 | 28.29 | 24.84 | 34.31 | 32.51 | 31.04 |
| Glanbia | 31.58 | 29.78 | 34.14 | 30.90 | 37.63 | 36.11 | 26.58 | 22.99 | 34.31 | 32.59 | 30.76 |
| Dairygold | 30.08 | | | | | | 27.85 | 24.62 | 34.26 | 32.76 | 30.89 |
| Average | 34.00 | 31.61 | 35.01 | 33.48 | 37.79 | 38.51 | 31.49 | 28.58 | 35.26 | 34.22 | 34.06 |
| Capsa Food | 31.14 | | | | | | | | | | 31.14 |
| Emmi | 49.46 | 42.43 | 48.72 | 46.80 | 49.82 | 51.69 | 53.35 | 50.02 | 51.88 | 48.23 | 51.60 |
| Fonterra | 29.54 | 30.50 | 30.15 | 29.99 | 35.54 | 28.71 | 21.05 | 27.62 | 31.63 | 29.01 | 31.19 |
| USA class III | 34.37 | 27.24 | 32.70 | 33.36 | 33.28 | 41.47 | 35.82 | 33.99 | 36.22 | 31.49 | 38.16 |

¹ This table has been adjusted compared to the previous publication (June 2020). Not all milk prices in column 2018 were in the correct order. The adjustment of 2018 milk prices led also to some minor changes of averages in column 1 compared to the previous publication.

Annex II Average currency exchange rates euro 2019 and 2018

1 euro = units

| | 2019 | 2018 | 2019/2018 |
|--------------------|----------|----------|-----------|
| Danish crown | 7.466067 | 7.453175 | -0.2% |
| New-Zealand dollar | 1.699283 | 1.70585 | 0.4% |
| British pound | 0.8773 | 0.884758 | 0.9% |
| US dollar | 1.119583 | 1.181517 | 5.5% |
| Swiss franc | 1.112675 | 1.154883 | 3.8% |