



Proposal for Gira's 2nd Edition

Global market dynamics in Technical Dairy Ingredients Markets to 2025

Whey protein concentrates, isolates and hydrolysates, demineralised whey powders
Caseins and caseinates
Milk protein concentrates and isolates
Micellar caseins and native whey proteins

Opportunities in Infant Formula, Adult Nutrition and Medical sectors

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Initially considered as waste by cheese producers, **liquid whey is now processed in a full range of derivatives from the most basic commodity to the highest added-value ingredients**. In parallel, the **growing demand** from food sectors and then nutritional sectors **led to the development (in quantity and quality) of other dairy protein powders from skimmed milk processing** like milk protein concentrates (MPC) and more recently non-denatured proteins from ultra-filtration (micellar caseins and native whey).

While ten years ago, **technical dairy proteins** value was essentially linked to the protein content, the **differentiation is now based on a lot of functional, nutritional or consumers' trends parameters** like purity, solubility, organic label... As a result, several grades coexist for a single powder from the "commodity" grade to premium specifications.

The **development of sport nutrition products** to the mainstream population **had several impacts on the demand for dairy proteins**:

- A **rapid increase in demand** in terms of volume
- The **demand for protein blends, with MPC, caseins and even plant proteins**, whereas whey used to be the bulk in the former selective sector of sport nutrition
- The **development of high functional powders** to be used in a wide range of products from clear beverages (protein waters) to protein bars, shakes or cakes.

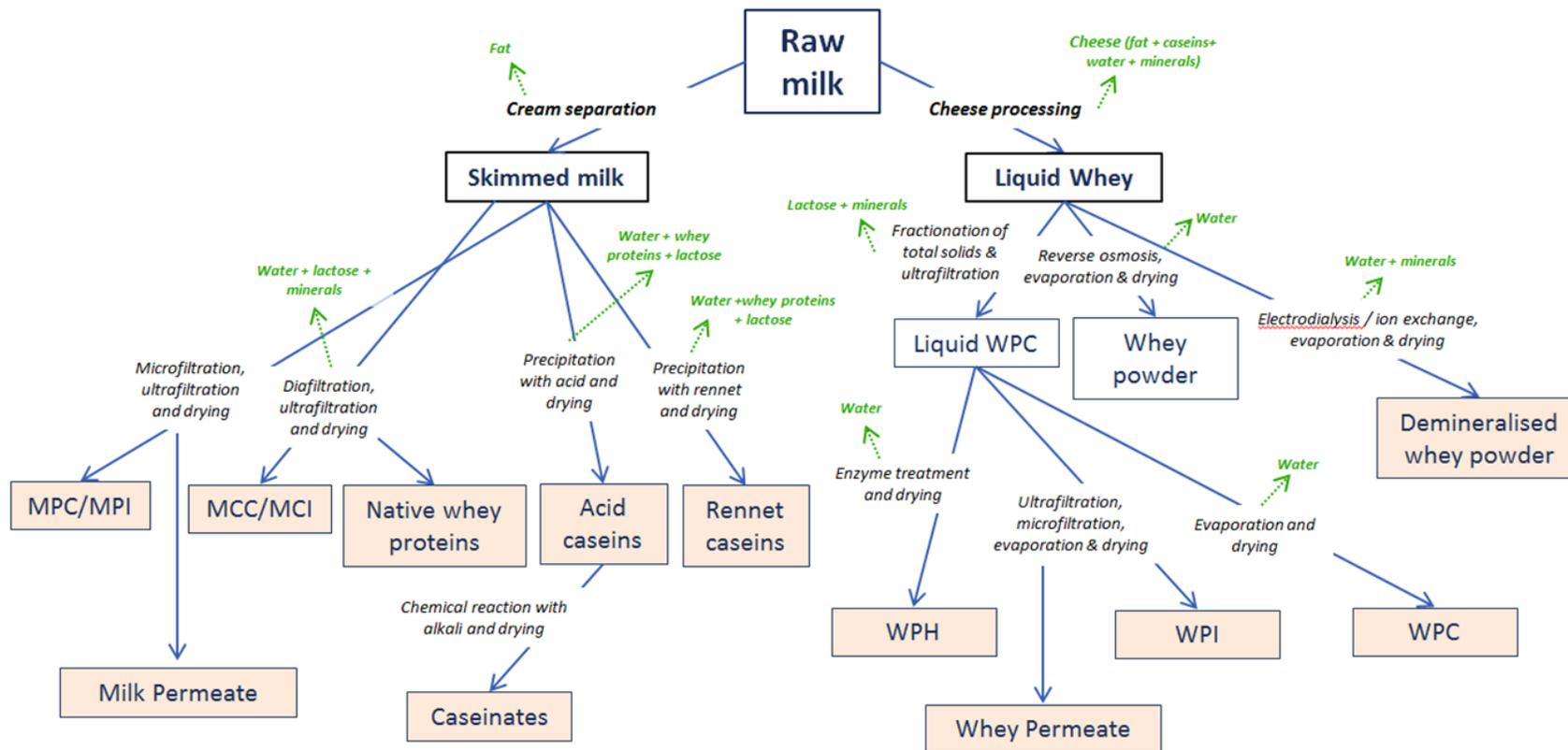
The global concern for **clean/clear label and "natural" products** is a major factor impacting dairy ingredients which have to face criticisms towards their animal origins (especially from cows) and the endless accusations about the bad health effects of milk (lactose intolerance, allergies...). As a consequence, competition from plant sourced proteins becomes more and more aggressive as these ingredients are considered better than dairy ingredients because their environmental impact and their fit with the development of vegan/flexitarian diets.

Our study will describe, measure and forecast the production, demand and end-uses of the main technical ingredients. It will draw conclusions and make recommendations for operators. It will also investigate alternative strategies for manufacturers to add value and/or improve their presence in specific areas.

The above will require us to carry out detailed qualitative and quantitative analyses in the main producing countries as well as in the main end-user markets in which they are incorporated into consumer food products.

In formulating our recommendations to suppliers of these ingredient products, we will draw attention to opportunities and supply "gaps" existing in the markets and how these are likely to evolve over the next 5 years.

Milk cracking to Technical Dairy Ingredients



SMP: Skimmed milk powder
 MPC/MPI: Milk protein concentrate/isolate
 WPH: Whey protein hydrolysate

MCC/MCI: Micellar casein concentrate/isolate
 WPC: Whey protein concentrate
 WPI: Whey protein isolate

Covered in the Study

Time coverage:

All market data (production, consumption, trade and end-user segments estimates) will be provided for 2009, 2014, 2019, 2020 estimate, 2021 and 2025 forecasts.

Ingredients coverage:

1. Technical dairy ingredients from cheese processing:

- Whey protein concentrates (WPC): with a split between low concentrated (protein content between 25% and 49%) and high concentrated powders (protein content between 50% and 89%)
- Whey protein isolates (WPI)
- Whey protein hydrolysates (WPH)
- Demineralised whey powders (DWP): with a split between low demineralised (<70%) and high demineralised powders (>70%)

NB: Whey permeate valorisation will be discussed in the different chapters of the study

2. Technical dairy ingredients from skimmed-milk processing:

- Milk protein concentrates and isolates (MPC/MPI): when possible the split between MPC (protein content <85%) and MPI will be done
- Caseins and caseinates: when possible the split between rennet and acid caseins will be done
- Micellar caseins (MCC/MCI) and native whey proteins (m-WPC/WPI)

NB: Milk permeate valorisation will be discussed in the different chapters of the study

Producer countries:

For each ingredient, production data will be provided for the following countries/regions:

- European Union
- New Zealand
- Argentina
- United States
- Australia
- Others

A focus on Russia, Ukraine and Belarus will be done for some ingredients (whey derivatives, caseins).

Consumer markets:

For each ingredient, consumption will be split between the following countries:

- European Union
- South America
- South East Asia
- South-Korea
- Middle-East/North Africa
- Oceania
- United States
- China
- Japan
- Russia
- Sub Saharan Africa
- Others

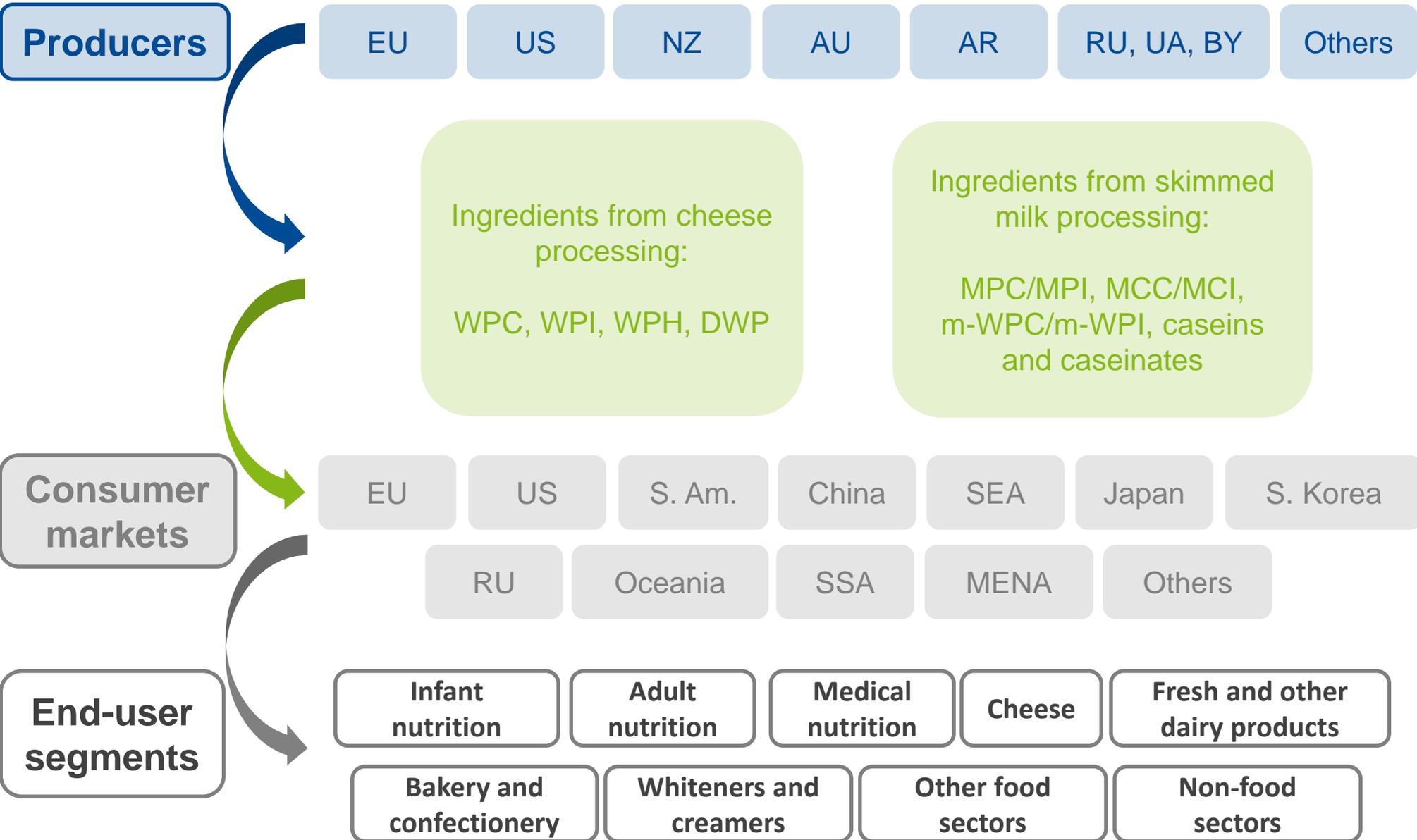
End-user segments:

For each ingredient, uses (volume) will be split between the following end-user segments:

- Infant nutrition
- Adult nutrition
- Fresh and other dairy products
- Whiteners/creamers
- Non-food sectors
- Medical nutrition
- Cheese
- Bakery and confectionery
- Other food sectors

A deep analysis of the sectors of infant nutrition, medical nutrition and adult nutrition will be done in separate reports.





In addition to Technical Dairy Ingredients market reports, **three reports will address the specific topics of infant nutrition, adult nutrition and medical nutrition**, which are the **three major end-user segments for dairy ingredients**:

- In terms of volume, **infant formula represents more than 20% of total whey protein uses** and is almost the exclusive end-user segment for DWP 70 and DWP 90
- **Adult nutrition represents 17% of total technical dairy proteins uses** (especially high concentrated whey powders) and growth is expected to remain high in coming years (> +5% p.a.)
- Although smaller in volume, **medical nutrition is also a fast growing sector** using the highest added-value technical dairy ingredients.

These three sectors show a real dynamism in terms of growth but also in terms of innovation, to try to respond to fast moving new consumers' trends:

- In the infant formula report, a deep analysis will be provided about the growing demand for premium products (probiotics, HMO...), organic products, competition with goat and sheep milk based infant powders, globally and with a special focus on China.
- The adult nutrition report will describe the growing American and European appetite for protein-enriched products in the blurred sectors of sport nutrition, weight management, healthy-ageing and active lifestyle. This wide sector must respond to ever increasing consumers' requirements for clean/clear label, high nutritional quality, high sensorial (taste, texture...) desires. In these segments, dairy ingredients, while still the main source of proteins, have to face competition from plant-proteins and lab-grown ingredients.
- The growth of medical nutrition, explained by increasing strains on public health services, have led to more self-administered treatments. Clinical products that were previously only administered at hospitals must now be more and more adapted to home consumption.



The full study will be divided into five reports and one synthesis and published in PowerPoint format:

[Report 1: Ingredients from cheese processing markets \(80 pages\)](#)

[Report 2: Ingredients from skimmed milk processing markets \(80 pages\)](#)

Content of these two reports:

1. Products definitions
2. Production, trade and consumption data and analysis
3. Price analysis
4. Competitive environment analysis (competing dairies and other products)
5. Recent innovations and expected future development
6. Conclusions: opportunities and key success factors

[Report 3: Infant nutrition global market \(50 pages\)](#)

[Report 4: Adult nutrition global market \(80 pages\)](#)

[Report 5: Medical nutrition global market \(20 pages\)](#)

Content of these three reports:

1. Global and regional markets description and future trends
2. Estimates of the types and volumes of technical dairy ingredients used, with forecasts for the medium-term
3. Competitive environment analysis; mini-strategic-profiles of the very largest operators
4. Conclusion: Opportunities, routes to market and key success factors for dairy ingredient suppliers

A special chapter on **plant-proteins** and **lab-grown proteins** markets will be included in the Adult nutrition report as the competition between dairy and plant proteins is now fierce in this sector.

[Synthesis report \(20 pages\):](#)

Overview of the main findings from the 5 reports, including consolidated volumes of ingredients by type and end-user markets, drivers of demand for ingredients, SWOT and recommendations for suppliers of technical dairy ingredients.

Report content of the 2017 Whey derivatives report

Gira		Report content
1. Definitions		Page 5
2. Dry whey products production		Page 10
3. Dry whey products trade		Page 27
4. Dry whey products consumption		Page 45
5. Dry whey products price		Page 63
6. Competitive environment		Page 68
7. Key strategic factors in dry whey products supply		Page 84
8. Conclusions		Page 87

Technical Dairy Ingredient Markets – Dry whey derivatives 4

We will use our tried and tested combination of **3 primary research approaches** in order to obtain the fullest possible cover of the key aspects and drivers of the markets to be analysed & forecast.

1. Internal database on the dairy sector compiled from

- 10 years of Gira Dairy Club data
 - the 1st edition of the Technical Ingredients study (2017-2018)
- and regularly enriched from our monthly dairy update newsletter.

2. Extensive documentary research covering all aspects of the product supply chains and the markets to be analysed

- All available documentation: trade press; company, retailer and association websites; national and customs data; consumer and sector studies
- Gira's own extensive dairy ingredient production, trade and consumption databases built up over 30 years of sector experience.

3. Operator Interviews

Experience from the previous edition revealed that the above research paints only a partial picture at best, and that it does not provide sufficient information to answer all questions. We will carry out a large number of interviews with operators in all the countries and segments to be analysed. These will enable us to both fill in the quantitative gaps left by the documentary research and to obtain the required qualitative insights on supply structures and demand, as well as on likely future developments in the markets and the competitive environments for operators.

The interviews will be carried out by Gira's experienced interviewer team using tailored questionnaires to obtain the required answers for each different product and market and taking the specificities of each country into consideration.

We would expect to undertake around 100 operator interviews across the ingredient and end-user sectors and countries indicated on the previous page. Our interviewers will essentially target:

- Large dairies and traders based in Europe, the United States and Oceania
- Manufacturers and importers supplying the end-user sectors in the countries concerned
- Retailers and caterers (where relevant)
- Associations, authorities and experts.

Gira's team of managers & consultants is probably the most experienced & knowledgeable in world dairy markets today:

Christophe Lafougere, CEO, 27 years with Gira. Supervisor of this study and lead contact for clients. He has headed up a very large number of strategic consultancy, due diligence and research assignments throughout the food & drink chain worldwide. He also directs all of Gira's consulting and research activities in the dairy sector. He is well-known throughout the dairy industry and he initiated and supervises the annual Gira Dairy Club.

Mylène Potier will be the **project manager of this study**. She has a PhD in Human Nutrition with particular reference to milk proteins and she is responsible within Gira for all studies and research on technical dairy ingredients. She has managed the successful first edition in 2017/2018. She will supervise a team of consultants with experience gained over many years from individual and multiclient studies in the dairy sector.

Véronique Aguera: Senior consultant. She has been managing Gira's assignments on the Russian, Ukraine and other CIS markets for meat, dairy and bakery for over 20 years.

James Caffyn: Senior consultant with Gira. He is responsible for the South American, Sub-Saharan African and Middle Eastern sections of Gira's annual world reports, with a special focus on the role of Fat Filled Milk Powders and their importance in an increasing number of markets.

Yi Chen: Senior Consultant. Bachelor in Economics from Beijing University, PhD in Economics & a Masters Degree in "Agribusiness & Cooperative Management". She is responsible for all of Gira's Chinese projects and consultancy.

Véronique Lagrange: Senior Consultant with Gira. She is the author of numerous articles and publications, strategic studies and technical manuals focusing on dairy ingredients. She has worked for US-based dairy trade associations for over 25 years.

Veijo Merilainen: Gira Associate. He plays a central role in all of Gira's dairy consultancy assignments. He brings hands-on operational and operator knowledge to this study. He worked for the major Finnish dairy Valio between 1978 and 2011. He became a member of the Valio Executive Board in 1990 and played a central role in all business development and change processes in the group.

Trevor Smith: Senior consultant with Gira. With 30 years' experience in the dairy industry, his analyses focus on the dairy industries in Europe.

Over the last 25 years we have **built up a major reputation and client base in the international dairy sector**. A list of our more recent dairy clients is given on the next page of this proposal.

Gira has **carried out many assignments in recent years for worldwide dairy companies** in areas and product sectors similar to those to be covered in this study.

Gira has **produced one of the first multi clients studies on technical dairy ingredients in 2017/2018** and we **regularly produce multiclient studies** concerning several of the **ingredient and end-user sectors and all of the countries covered in this study**. The most relevant being the annual Gira Dairy Club, for which the latest list of members is on the next page.

Gira is **active in strategy consulting and market research in most food and drink sectors worldwide**. More details are available on www.girafood.com.

Gira's **extensive network of international experts, contacts and clients** in most dairy sectors means that it is **uniquely qualified to carry out this innovative and highly challenging research and analysis project**. Experience has also shown that our long-standing reputation for research and consultancy in the global market opens doors for us to the most informed and competent sources of information.

Our specialist consultants – our high credibility in the dairy sector – our long client list – along with the multiclient studies for which Gira is widely known, all give us privileged access to information and decision-makers in dairies and end-user markets throughout the world.

Gira clients in the dairy sector:

- Agril/Eurial
- Agropur
- ALIC
- Alpma
- Arla Foods
- CHR Hansen
- CNIEL
- Coveris
- Dairy Crest
- Dairygold
- DanTrade (Danone)
- DMK
- DSM
- Dupont
- Emmi
- EU Commission
- Fedegan
- FIT
- Fonterra
- Friesland Campina
- Glanbia
- Huishan Dairy
- IDB
- Kerry
- Lactalis
- Laïta
- Meggle
- Mondelez
- Mueller
- Nestlé
- Rupp
- Sealed Air
- Sodiaal
- Unilever
- USDEC
- Valio
- Yili
- Retailers
- Caterers
- Banks and Investment Funds

Members of the Gira Dairy Club 2019

- *Agropur*
- *ALIC*
- *Arla Foods*
- *Bel*
- *Board Bia*
- *CHR Hansen*
- *Danone*
- *DMK Group*
- *DSM*
- *Emmi*
- *Eurial*
- *European Commission*
- *Ferrero*
- *Fit*
- *Fonterra*
- *Glanbia*
- *Land O' Lakes*
- *Meggle*
- *Sodiaal*
- *USDEC*
- *Valio*

Timing:

Work should start in February 2020 with reports being available to clients in July 2020.

Subscription:

A Founder Client subscription to the complete study programme and the Presentation as previously set out costs Euros 26,000 (before any applicable taxes). The price will increase for subscriptions after the work has started. Part-subscription options will also be available.

Payment will be invoiced and requested as follows:

- 50% at the start of work
- 25% three months later
- 25% on delivery of the final reports.

In the unlikely event that insufficient Founder Client subscriptions are obtained, Gira reserves the right to not start work on the study. In this case, existing subscription contracts will become null and void.

For more information, please contact:

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