

27 July 2018

Ministry for Primary Industries
Pastoral House
25 The Terrace
Wellington
New Zealand
By email: dira@mpi.govt.nz

RESPONSE TO MPI INFORMATION REQUEST OF 11 JUNE 2018

- 1 Thank you for your request for information; we appreciate the opportunity to engage with MPI on these issues.
- 2 We particularly appreciate MPI providing the “Context” section of your request for information. This has allowed us to understand your rationale for seeking the information, informed our choice of the most useful information to provide, and also given us an opportunity to provide feedback where your understanding and assumptions differ from our experience.
- 3 In this response, we firstly set out our comments on the Context section of your request, and secondly provide data and evidence that we believe will assist your work.
- 4 Please treat all of the deleted information in this response as confidential, on the grounds that it is commercially sensitive and disclosure of this information would be likely to unreasonably prejudice our commercial position in terms of section 9(2)(b) of the Official Information Act 1982. If you receive any requests under the Official Information Act 1982 for any of that information please contact us.
- 5 We understand you may have follow-up questions arising out of this response. We would be pleased to have an opportunity to discuss these with you.

Context

- 6 In the Context section, you usefully test the following propositions:
 - Open entry introduces a short term forecasting risk which requires Fonterra to invest in excess capacity.
 - That additional capacity could be in commodity processing or in a value-added product line.
 - Pre-TAF, there was a requirement for farmers, which Fonterra “heavily relied on”, to pay a “fair value share” on entry and when increasing supply. This

meant that if Fonterra were to invest into a value-add product line, the value of that value-add processing assets would be reflected in the value of Fonterra's share capital.

- 7 This differs from our experience and the way we think about the problems created by open entry:
- The challenge of short term forecasting, and the access to capital to build production assets, is not the essential issue.
 - The essential issue is:
 - In a period of higher milk growth, open entry imposes a supply-driven orientation that makes it difficult to make significant investments in anything other than commodity processing; and
 - As detailed further in our submission, during periods where the sector has excess capacity (those periods being exacerbated by open entry), there is a risk of a downward spiral of low-margin competition, inability to move up the value chain and factory closures.¹
- 8 You have also indicated you are seeking to understand the extent to which milk supply from “inefficient dairy conversions”, “environmentally sensitive areas”, or “poor environmental and animal welfare practices” are widespread among Fonterra's current and potential future suppliers. Specifically:
- evidence of when Fonterra ended up picking up milk from such farms that, had it not been required to do so by the DIRA open entry requirement, it would have chosen not to; and
 - the criteria/definitions of the relevant practices would Fonterra apply, if it had complete discretion to refuse milk supply.
- 9 We assume in this response that the non-discrimination rule would be removed along with the open entry requirements, which for the reasons given in our submission we consider it should.²
- 10 We expand on these points below.
- How we determine our capacity investment requirements**
- 11 Broadly, MPI characterises the problem presented by open entry as necessitating Fonterra holding additional excess capacity than it otherwise would, in the short term, but in the medium to long-term open entry ensures new milk pays for itself if accompanied by appropriate fair value share capital. This view is also based on a pre-TAF environment, where Fonterra's equity increased and decreased with milk supply. In our experience, the problem presented by open entry is broader than that, and permeates our strategic considerations, including regarding the capacity and nature of investments (including decisions to “mothball” investments). Open entry does not simply require us to forecast supply and calculate how much additional capacity we require, over and above the “buffer” we would otherwise carry.³ Rather, the requirements affect Fonterra more broadly, and have a role in driving our strategic orientation in considering capacity investments.

¹ See our submission, paragraphs 30-33.

² See from paragraph 2.45.

³ That said, forecasting over periods longer than a single season is made more difficult by open entry, as detailed below at 0□

- 12 Under open entry:
- Fonterra is effectively required to accept all growth in milk supply.
 - Fonterra is the processor of all marginal milk supply by both existing and potential Fonterra suppliers.
- 13 In other words, under open entry we *must* have the capacity to process every new litre of milk we are supplied, and are effectively unable to turn down any new supply.⁴ The alternative if we have insufficient capacity to process milk is to pick up the milk and then dump it, which is a last resort for environmental as well as commercial reasons. The possibility of milk growth, and the need to cater to the marginal litre rather than having the option to turn it down, means the final litre is the starting point for any consideration of capacity needs.
- 14 In addition, to ensure financial viability, we must seek to deliver a positive return on all of the milk it is supplied in both the short term (i.e. annual) and long term (i.e. 20 years or more).
- 15 Accordingly, in relation to new capacity we must first and foremost focus on ensuring we can *profitably* accommodate the marginal litre.
- 16 As a consequence, irrespective of its strategic priorities, Fonterra's investment orientation is supply-led rather than demand-driven. A supply-led approach takes as its starting point and key focus the likely supply for the forecast period. Specifically, we plan our future capacity requirements based on:
- Forecasting New Zealand milk supply growth by region. We model a number of scenarios using forecasts from both internal and external sources. While long term investment planning is based on 5 – 10 year forecasts, immediate investment decisions are typically based on the 3 year forecast, given the lead time required from decision to completion of construction of new capacity.
 - Applying a buffer to the resulting forecasts, to allow for both growth ahead of forecast and the potential level of year-on-year volatility in total New Zealand milk supply.
 - Allowing for existing and known capacity investments (both ours and competitors') by region.
- 17 Fonterra's capacity forecasting is inevitably conservative, in other words more capacity is commissioned than is required, given:
- DIRA open entry requirements.
 - The cost and other implications, particularly environmental, of having insufficient peak capacity and being forced to dump milk. (In practice this issue can result in additional logistics costs to move milk around the system, as well as impacting the environment.)
 - The inherent uncertainty of future growth rates.

⁴ For discussion of the lack of impact of capacity constraint notices and the transport exception, see our submission, Annex 1 at 4 and 6.

- The lead time to build new capacity, which means we must take a conservative approach in case demand differs materially from forecasts over the relevant time period.



- 18 Clearly, the difficulty here is not only one of accurate forecasting (although open entry does make forecasting more difficult – see paragraph 1 of the Data and Evidence section below). Rather, it is the manner and stage at which supply forecasting enters our consideration i.e. likely supply is the primary focus of capacity decisions. As we explain below, because these are large, long-lived capital investments, the supply orientation drives Fonterra toward commodity and ingredient production capacity.
- 19 In comparison, in the absence of open entry, we would be able to move to a largely demand-led approach, although we would still need to manage the seasonality of supply.
- 20 A demand-led approach would involve planning capacity with more of a focus on our work to develop and capture demand in both existing and new markets. While milk supply levels would nevertheless be uncertain, we would have the ability to manage the growth of new supply in a way that would avoid significant growth beyond what is needed to meet further value-add demand. Therefore, our capacity planning decisions could focus more on fulfilling a plan that is within our control, rather than making sure we can accommodate every additional litre. Under a demand-led approach, as more value-add markets are developed and grow over time, and risk and uncertainty reduce, new capacity would be built along with matching growth in milk supply.
- 21 Of course, Fonterra’s ability to control its supply would not be unlimited in the absence of open entry. For example, as we have indicated previously, we would not generally be in a position to decline applications by existing farmer shareholders to increase supply from existing farms, due to our co-operative structure.⁶ Nevertheless, in the absence of open entry it would be much easier for us to move towards a demand-led approach.
- How we choose what type of assets we will invest in**
- 22 The supply-led approach has inefficient consequences for our incentives around asset choice. It has particularly significant implications in an environment of growing milk supply (as we experienced from the 2007/08 season to the 2014/15 season). When milk supply is expected to grow quickly, supply becomes even more of a focus.
- 23 In periods of slower growth in milk supply, we are able to accommodate our open entry requirements more readily, and to focus more on demand factors. As set out in our submission, milk growth has slowed since the 2014/15 season and therefore the pressures created by open entry have eased (because we have not been forced to invest in capacity simply to cope with the volume, or potential volume, of milk

⁵ See NERA, *Review of Commerce Commission’s draft report into dairy competition: Fonterra Co-operative Group Limited*, 4 December 2015, 3.2.3.

⁶ See our submission of 29 June, paragraph 2.41.

being supplied). As a consequence, we have had a greater ability to implement our commercial strategy. Since 2014, Fonterra has invested in a number of new plants and equipment, including cream cheese, lactoferrin and mozzarella. We have not commissioned any new commodity milk powder dryer plants since 2014.⁷ The point here is not necessarily to favour slow milk growth, which has implications for New Zealand export growth and living standards. Rather, this demonstrates what would be possible in all supply conditions absent the open entry requirement.

- 24 The following factors are taken into account when we are deciding what assets to invest in:
- Primarily, the risk profile associated with excess capacity and the overarching need to generate a return on investment over both the short term (i.e. annual) and long term (i.e. 20 years or more) to ensure the financial viability of the Co-operative. This incentivises commodity and ingredient production, which has a relatively lower cost per litre of additional capacity installed and also a relatively higher level of certainty of having matching demand, rather than specific value-add products. We measure return on capital at a business-unit level, rather than return on capital employed for individual capital investments (see point 8 under the Data and Evidence section below).
 - In addition:
 - Our co-operative nature and structure require conservative risk management and appropriate fiscal discipline (see further below from paragraph 28), resulting in a bias towards options that require lower capital investment per litre of capacity and higher certainty of demand.
 - The long life of the production assets (30 years or more of useful life), the substantial capital cost, and relative lack of flexibility in their potential product mix output, along with the need to consider replacement of the assets at the end of their useful life, means decisions are long term in nature, which tends to incentivise a lower risk tolerance. A central question is whether the demand being catered for will persist for three decades.
 - The lack of availability of low-risk capacity investment options for the more consumer driven value-add products (although where we conclude these exist, they are generally considered for prioritisation).
- 25 Given the above, in times of rapid milk supply growth we face particularly strong incentives to choose lower-risk, commodity producing assets with the potential to make immediate positive returns, and low volatility in annual returns over the long run. In times of lower or flat milk supply growth, those incentives are not so strong.
- 26 We acknowledge that excess capacity (and redundant assets) are not only a result of open entry, but can also result from other factors such as weather conditions (e.g. droughts), changes in regulations and land use, and in particular competitor capacity investments. Given these other uncertainties, in our view it is even more important that open entry be removed as an additional factor.

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⁷ See our submission of 29 June 2018, paragraph 2.27.

How we fund our investments

- 28 Under DIRA, particularly open entry and exit,⁸ prior to the introduction of Trading Among Farmers (**TAF**) Fonterra managed two conflicting risks:
- The risk of having insufficient peak capacity and being unable to make a positive return on marginal supply, due to the requirement to accept and process any marginal industry growth in milk supply.
 - The risk of excess capacity, and the related financial risk of significant capital redemption and capital outflows (which the requirement to allow open exit contributes to).
- 29 The financial risk of significant capital redemption and capital outflows was observed in 2008 when milk supply significantly reduced and many farmers exited (due to drought); Fonterra had net capital redemption of \$600m. The potential implications of this type of equity withdrawal included:
- The inability to maintain an appropriate financial risk profile on an ongoing basis, and appropriately manage operating costs and the cash flows of the Co-operative.
 - The inability to access funding on an ongoing basis as lenders respond to the higher financial risk profile.
 - The cost of related financing, as lenders who are willing to finance the Co-operative expect a higher return corresponding to the higher risk profile.
 - The potential compounding effect of these factors which could lead to a reduction in the returns generated by, and the financial stability of, the Co-operative.
- 30 To address this risk, and to allow market-based price discovery for Fonterra shares, TAF was introduced in 2012.
- 31 TAF effectively meant that farmers would trade shares among themselves on the Fonterra Shareholders' Market rather than having to directly buy from or sell to Fonterra. It also meant that public market investors could hold units in the Fonterra Shareholders' Fund, enabling them to access the economic rights associated with Fonterra shares held in trust, and ensure market-based price discovery (moving away from a fixed fair value share price set annually by an independent valuer).
- 32 The downside of this structure is that growth in milk supply does not directly increase Fonterra's issued equity (growth milk is backed by shares purchased on the Fonterra Shareholders' Market, or units purchased in the Fonterra Shareholders' Fund and converted to shares, rather than shares purchased directly from Fonterra).
- 33 As a result, capacity investment and other investment requirements need to be met through either retained earnings or increased debt financing, plus a small amount of

⁸ As set out in our submission from paragraph 2.52, Fonterra does not propose any changes to the open exit requirements, at this stage. While the right to withdraw and the "160km rule" do impose material costs on Fonterra, they also allow Fonterra some flexibility and we manage to compete effectively within their requirements.

new equity raised through a dividend reinvestment plan. Overall, these sources of financing are adequate to fund forecast capacity investments in the long run.

- 34 While TAF effectively addressed the redemption risk, it does not (and was never intended to), address the risk of insufficient or excess capacity.

When we ended up collecting milk from farms that, had we not been required to do so by the DIRA open entry requirement, we would have chosen not to

Inefficient dairy conversions and environmentally sensitive areas

- 35 The question of whether milk supply from “environmentally sensitive areas” is widespread among current and potential future suppliers is complex. We have always operated under the open entry framework and have not been able to reject supply based on environmental grounds. There are consequently no determinative efficiency or environmental criteria in our decision-making around entry into the Co-operative.
- 36 In terms of “inefficient dairy conversions”, there are likely to be dairy farms, and potential conversions, in locations where it is not commercially rational for Fonterra to pick up milk, although given our wide existing geographical coverage the number is not likely to be large. It is also worth noting that in the absence of both open entry and the non-discrimination rule we could accept or turn down new supply, or accept supply on altered terms to reflect the particular value the supply represents to us. In any event, the removal of open entry would remove the distortionary incentive to convert to dairying over other land uses that arises out of having a guaranteed buyer for milk.
- 37 At the national level, there is no currently accepted determination of which areas of the country are sensitive to land use intensification. However, as a member of the Land and Water Forum (**LAWF**), we support the production of maps identifying critical source areas and areas of significant ecological value and the use, in appropriate circumstances, of moratoria on dairy conversions in those areas.⁹
- 38 At a regional level, we have suppliers from regions which have set new regulatory limits to improve environmental outcomes, such as in Horizons, Canterbury and the Waikato, and we support these farmers in meeting those new requirements through, for example, the production of nutrient reports. We are also working to ensure every one of our farmers has a tailored Farm Environmental Plan, using digital mapping and other technologies to show them what’s happening above and below the ground, and to help them identify opportunities to improve both the economic and environmental efficiency of their farms.
- 39 The Mackenzie Basin is clearly an area that is environmentally sensitive and of local and national significance for its natural characteristics. We have publicly expressed our strong preference for no further dairy expansion in the Mackenzie Basin.¹⁰ Currently, we have 5 suppliers in that region.
- 40 We have also recently supported regional planning provisions that make dairy conversion / expansion discretionary, non-complying or even prohibited. For example, in relation to Waikato PC 1, we supported the requirement for a robust effects assessment for any land use change, and in Southland we supported significant restrictions on further dairy in more sensitive physiographic zones. We

⁹ Land and Water Forum. 2015 *The Fourth Report of the Land and Water Forum*, [66] – [70].

¹⁰ See for example <https://www.stuff.co.nz/business/farming/105231857/mackenzie-basin-dairy-expansion-explainer> (accessed 12 July 2018); our submission of 29 June, paragraph 2.42(b).

also supported the Te Waikoropupu Springs water conservation order (in part) even though that order would limit any dairy expansion in the catchment.

Poor environmental and animal welfare practices

- 41 Fonterra may suspend milk collection or not begin to collect milk, if a supplier is not complying with our standard terms of supply¹¹ set out in Fonterra's "Farmers' Handbook".¹² We work with new suppliers prior to first milk collection (and existing suppliers) to confirm they can comply (and are complying) with our standards terms of supply.
- 42 Recent data on the number of farms where we have suspended collection of milk is set out below:
- In the 2016/17 season, we issued notices of suspension of collection to 78 farms, all due to non-completion of fencing to exclude stock from waterways.
 - In the 2017/18 season, we issued notices of suspension of collection to:
 - 98 farms due to non-compliance with stock exclusion standards (15 of which were supplying winter milk)
 - one farm in the South Island and 7 farms in the North Island due to non-compliance with effluent requirements.
- 43 The Farm Source regional team works closely with each farm both before we suspend collection and where collection is suspended to support them to make the necessary improvements. Where collection is suspended during the winter months, we expect most farms to have completed the required work by the time they start milking.
- 44 Although Fonterra may refuse to *collect* milk as described above, under open entry Fonterra must accept *applications for new supply* from farms that it anticipates would be non-compliant with its environmental and good farming practice (including animal welfare) requirements.¹³ Allowing such a farm to become part of the Co-operative sends the wrong message to farmers about the conduct Fonterra accepts. Furthermore, once such a farm is part of the Co-operative, it directly impacts the reputation of Fonterra and that of our farmers. In practice, Fonterra invests significant time and effort (often over the winter months before milk supply commences) to help farmers meet our supply terms and suspending collection of milk is used only as a last resort.
- 45 In the absence of open entry, it is likely that some (although not necessarily a large number of) farmers would have been turned down, on the basis of their environmental and animal welfare standards. Others would have had to work to meet standards on the basis they wanted to join the Co-operative. A key cost of open entry is the lost opportunity to incentivise farmers to meet appropriate on-farm standards *before* they join the Co-operative.

The criteria/definitions we would use if we had complete discretion to accept milk supply

- 46 In relation to environmentally sensitive land, as noted above, as a member of the LAWF, we support the approach where LAWF advises and assists Ministers to:

¹¹ See DIRA, section 74(2).

¹² Available at <https://nzfarmsource.co.nz/assets/Resources/Dairy-Diary/Fonterra-Farmers-Handbook.pdf>.

¹³ See also our submission of 29 June, Appendix, paragraphs 2.38-2.40.

- produce maps of at-risk catchments within New Zealand (i.e. those with declining water quality and those that have high values that need to be protected) such as the Mackenzie Basin; and
 - impose, in appropriate circumstances, moratoria on further intensification to allow time for regional planning to occur and improve outcomes for the catchment.
- 47 Fonterra would turn down applications for new supply from areas where a moratorium was in place.
- 48 Fonterra would set clear criteria for turning down farms on environmental grounds in other areas, based on published, evidence based frameworks of good management practices and prior recorded environmental or animal welfare practices by that farm or farmer (such as any prior convictions or offences). We would review our environmental and other expectations of new suppliers, both in terms of entry into the Co-operative and ongoing supply. We would require evidence that new suppliers would comply with our standards in advance of being accepted.
- 49 We take our environmental and animal welfare standards seriously, and invest in ensuring our farmers can meet those standards and are held to account when they do not. Our farmers, like all New Zealanders, expect us to act responsibly and we would set and apply any future entry criteria and standards consistently with that expectation. We anticipate that potential future suppliers would engage with Fonterra earlier than they currently do, to determine whether and how they would meet our entry criteria.
- 50 In relation to inefficient dairy conversions, there is a relatively straightforward question as to whether it would be commercially rational to accept supply from a given would-be supplier (including on altered terms).

DATA AND EVIDENCE

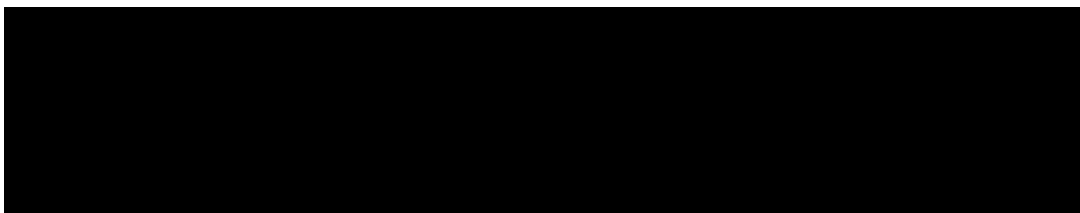
In this section, we have endeavoured to provide the data and evidence listed in your email (in the order listed), or indicate where we consider alternative data better addresses the issues you are seeking to understand and verify. Note that in some cases, we have not been able to locate the more historical data.

The relevant data and evidence is attached as pdf documents as referenced. If you require any of these in excel format, please let us know.

1 ***Total kgMS collected and processed by Fonterra in each year 2002 – 2017.***

- [QD1] shows the total kgMS collected and processed together with the associated single-season forecasts. [REDACTED]
- As discussed above, in our experience the accuracy of short-term (single season) forecasting is not a key issue under open entry. Rather:
 - It is the manner and stage at which forecasting enters our consideration that is a key drawback of open entry. In other words, supply considerations come first, and are of ultimate significance, rather than demand considerations. Problems caused by open entry are therefore much broader than forecasting.
 - Open entry does give rise to difficulties for short term forecasting, but these manifest more materially over a time horizon longer than a single season. By the time of the season in question, we tend to have a good sense of the likely amount of its supply due to the annual application process. As you will see from the material we have provided in [QD1], our actual milk supply does not tend to differ materially from our single-season forecasts on a percentage basis (although it is important to note that small percentages still amount to large volumes). But capacity planning and investment decisions are made over a longer time horizon than one year; over longer time horizons there is a much higher degree of uncertainty and open entry is a significant contributor to that uncertainty [REDACTED]. These percentages are significant in the context of our planning, and variances either way are a direct cost, either through over-investment in capacity (unutilised capacity, no return on capital), or under-investment leading to significant costs related to disposing of milk that is unable to be processed or moving it to an alternative site, and also a cost in needing to invest in “quickest to build” capacity (i.e. WMP plants) in order to catch up to milk supply growth.

2 ***Fonterra’s total processing capacity, by kgMS over the period 2002 – 2017.***



3 ***Fonterra's farm gate milk price, dividend and retained earnings in each of the 2002 – 2017 years, per kgMS/share.***

- This information is set out in [QD3, QD15 and QD16], and is separately available in the annual reports sent to you in June.

4 ***The type, quantity, and individual cost of capital investments Fonterra has made in each year 2002 through 2017, split by location.***

- [QD4] responds to your request for information on Fonterra's capital investments.
- Fonterra makes a large number of capital investments each year. In [QD4] we have provided:
 - In the top table, all capital spend for our global operations business unit. This spend is categorised as follows:
 - Essential: Projects that are required due to policies (either internal, such as health and safety, or external, such as energy initiatives) or required to meet a regulatory framework.
 - Discretionary: Projects that fall outside the above two categories, which are made for a wide range of purposes and intended benefits.
 - Capacity: Spend that is made to meet peak milk requirements in New Zealand.
 - In the lower table, the significant projects (mostly new plant builds or capacity increases) that are included in the top table. Excluded from the bottom table are all non-New Zealand manufacturing related spend such as coolstores/drystores, Heerenveen (Fonterra's first wholly owned and operated ingredients plant in Europe, which is situated in The Netherlands and processes ██████ liquid milk equivalent litres of milk each year), and smaller capital projects.
- As discussed above, in the absence of open entry we would expect the investments we made up to 2014 that focused on meeting peak capacity to be fewer, and to be of a different character (see our submission of 29 June). As we have previously indicated, this has been observed since 2014 in an environment of lower milk growth.

5 ***Sources of funds for these capital investments.***

- Fonterra's response is set out in [QD5]. In terms of the sources of funding for our capital investments, in a post-TAF environment, capital investments are funded by debt and retained earnings (see also [QD6] and [QD7]).

6 ***Percentage of Fonterra equity owned by farmers as "dry shares" in each year 2002 through 2017.***

- Fonterra's response to this request is set out in [QD6]. The relevance of equity capital on entry in the post-TAF environment is described above at paragraphs 28 to 33.

7 ***Percentage of Fonterra equity owned as "units" in each year 2012 through 2017.***

- Fonterra's response to this request is set out in [QD7]. The relevance of Fonterra's capital structure in the post-TAF environment is described above at paragraphs 28 to 33. Note that the figures in [QD7] are as at early June (following end of season calculations and new season shareholding requirements).

8 ***The return on capital employed on each of these capital investments for each year 2002-2017.***

- Given Fonterra's large size and number of capital investments, we do not measure return on capital employed for individual capital investments, but rather on a business unit-level. Fonterra reports the return on capital for each of its business units each year in its annual report.

9 ***List of plants that Fonterra has closed and those it considered closing since 2002, and why.***

- Our response to this request is set out in [QD9].

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10 ***Number of dairy farmers (and milk supply volumes) of dairy farms that have exited Fonterra in each of the 2002-2017 seasons (per region/catchment area).***

- Our response is set out in [QD10].

11 ***Location, amount and cost to Fonterra of having to build additional capacity (rather than utilising existing spare capacity) for processing these re-entered milk volumes, that Fonterra would not have built for other reasons (growth of Fonterra's existing supply or to support its milk growth strategy).***

- Fonterra does not have data that would show the way re-entered milk volumes in particular affect its capacity decisions. In this regard, we refer to our comments on the relevance of forecasting to open entry, above at paragraphs 11 to 21 and at point 1 in Data and Evidence.

- 12 ***Amount of equity capital dairy farms that have re-entered/entered Fonterra invested in Fonterra in each of the 2002-2017 years.***
- The relevance of equity capital on entry to Fonterra in the post-TAF environment, is described above at paragraphs 28 to 33.
- 13 ***Amount of this new equity that has been used to pay for building new processing capacity required to process that milk.***
- The relevance of equity capital on entry to Fonterra in the post-TAF environment, is described above at paragraphs 28 to 33. See also [QD3, QD15 and QD16], and [QD4].
- 14 ***Amount of the remainder (if any) of new equity that was invested in non-processing activities.***
- The relevance of equity capital on entry to Fonterra in the post-TAF environment is described above at paragraphs 28 to 33.
- 15 ***Total R&D investment made by Fonterra for each year 2002 through 2017.***
- The response to this request is set out in [QD3, QD15 and QD16]. Further detail on R&D is set out in our 29 June submission, and as noted in paragraph 4.22 of that submission, additional R&D occurs on-farm, at manufacturing sites, offshore and in collaboration with other research institutes.
- 16 ***Total marketing investment made by Fonterra for each year 2002 through 2017.***
- The response to this request is set out in [QD3, QD15 and QD16].
- 17 ***Employment (by FTE) at Fonterra for years 2002-2017.***
- This information is set out in the attached chart, [QD 17 - Employment by FTE 2002-2017].
 - Please note the source of the data in this spreadsheet is Fonterra's annual reporting, except for the years 2002, 2003 and 2004 (highlighted in yellow) the source for which is Fonterra's internal financial reporting function.
 - As you will see, since 2009 Fonterra has also reported separately on salaried and waged staff.
- 18 ***Initiatives taken by Fonterra to mitigate the environmental impact of dairy farming and processing.***
- Information relevant to this request is summarised in our submission.¹⁴ This includes a summary of our initiatives relating to effluent management, fencing waterways, nutrient management and reporting and reducing emissions and water use in our manufacturing operations. Further detail is available in Fonterra's Sustainability Report and in Fonterra's Water Book, at www.fonterra.com/sustainabilityreport and in Fonterra's Water Book, at https://view.publitas.com/fonterra/fonterra_water_commitments/page/1

¹⁴ See in particular from paragraph 3.12.

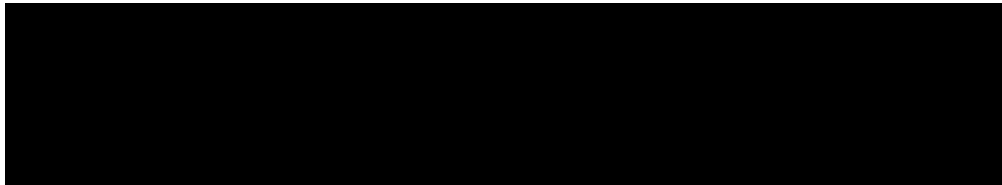
19 **Copies of Fonterra's annual results for 2002 through to 2010 years.**

- This material has been provided separately on 21/22 June.

20 **Any information Fonterra may have about changes in choice and variety of dairy products available to NZ consumers during 2002-2017 period. We are specifically interested in whether, and if so by how much, has this increased over time; and whether it reflects R&D investment by processors over time or other factors such as changing consumer preferences. Any data/evidence (perhaps collected by your marketing department) on product description, sales volumes and prices (at retail and/or wholesale level) over the 2002 - 2017 time period would be most invaluable. Furthermore, if you had any information about changes in consumer awareness levels and engagement, we would also find this type of information very useful.**

- Competition in domestic consumer markets is described in Fonterra's 29 June 2018 submission, in response to question 8 of the terms of reference. Domestic consumer markets are highly competitive and are delivering choice for consumers, both in affordable product (with the growth of private label brands), and at the premium end of the market (through independent niche suppliers and increased competition from imports). Companies are innovating with new products, formats, and brands. We have also seen the rise of dairy alternatives (e.g. nut "milks" and coconut yoghurt), which are exerting competitive pressure on dairy products.

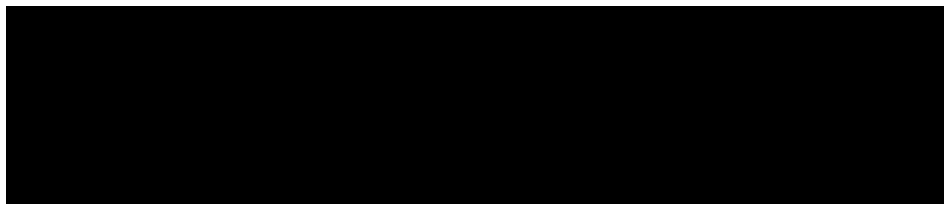
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- Private label brands have grown to more than [REDACTED] share by value of all dairy products, materially increasing competition in relation to bulk and affordable dairy products. [REDACTED]

- We have also seen the growth of independent niche suppliers. [REDACTED]

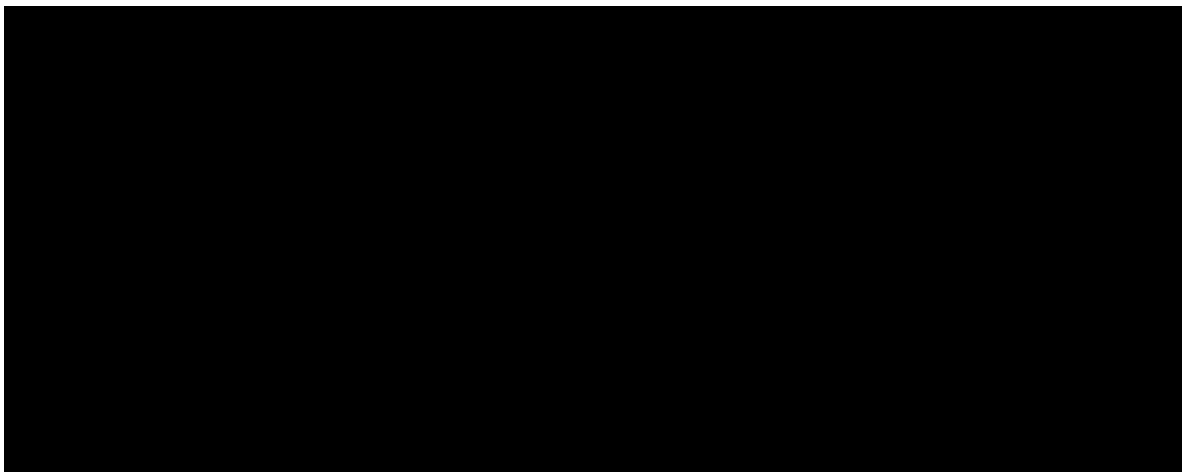
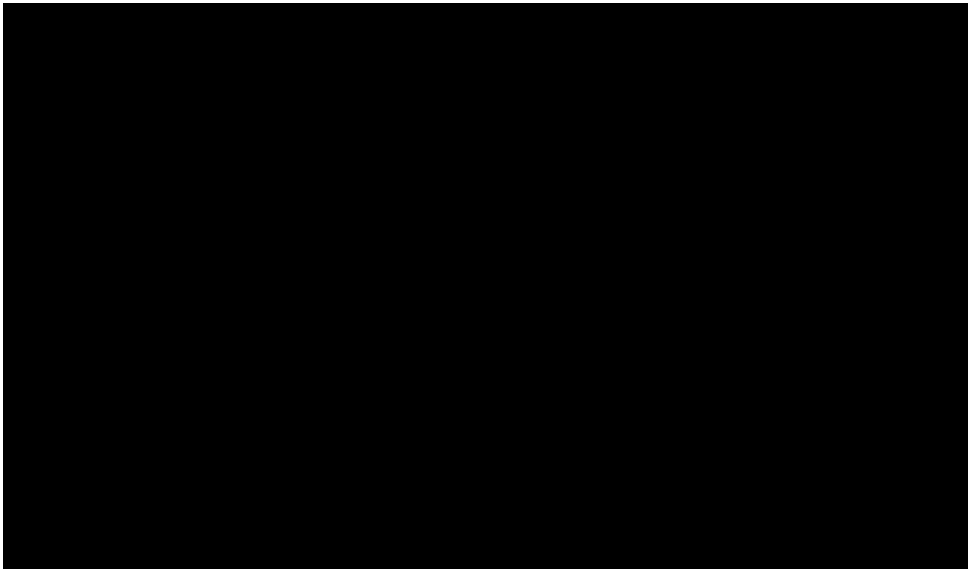
[REDACTED]



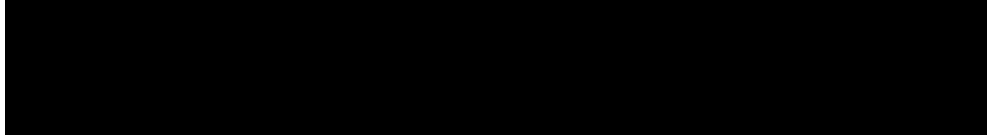
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[REDACTED]

- There has also been substantial growth in the market for non-dairy alternatives as shown in the following graphs:



- Consumer preferences have led to the reformulation of existing products to enhance their nutritional composition. For example, around two years ago, Fonterra Brands New Zealand introduced all natural colours and flavours in Tip Top ice-cream. Earlier this year, we launched a reformulated Primo product with 40% less sugar than the previous formulation of Primo.
- In general, dairy consumption in New Zealand is declining, and consumer preference is shifting to premium products.



- The graph below provides sales prices of key dairy products since 2006. It shows that:
 - cheese prices have declined significantly since a peak in 2008;
 - milk prices have increased by 9% (compared with inflation of 18.7% over the same period)¹⁵ – which is in line with other grocery products that have, on average, increased by around 10% and meat, poultry and fish that have increased around 12%;¹⁶
 - there has been a significant price increase for butter (44%), with prices linked to global demand.

NZ Retail Dairy Price (CPI Survey), 2006 – 2018 (See [QD20]).

NZ Retail Dairy Price (CPI Survey)



¹⁵ RBNZ inflation calculator: <https://www.rbnz.govt.nz/monetary-policy/inflation-calculator>.

¹⁶ Statistics NZ.