



AUSTRALIAN
**FOOD &
GROCERY**
COUNCIL



AFGC submission Import risk review for dairy products for human consumption – second draft report

17 June 2024

PREFACE

The Australian Food and Grocery Council (AFGC) is the leading national organisation representing Australia's food, beverage and grocery manufacturing sector.

With an annual turnover in the 2021-22 financial year of \$144 billion, Australia's food and grocery manufacturing sector makes a substantial contribution to the Australian economy and is vital to the nation's future prosperity.

The diverse and sustainable industry is made up of over 17,000 businesses ranging from some of the largest globally significant multinational companies to small and medium enterprises. Each of these businesses contributed to an industry-wide \$3.2 billion capital investment in 2021-22.

Food, beverage and grocery manufacturing together forms Australia's largest manufacturing sector, representing over 32 per cent of total manufacturing turnover in Australia. The industry makes a large contribution to rural and regional Australia economies, with almost 40 per cent of its 271,000 employees being in rural and regional Australia.

It is essential to the economic and social development of Australia, and particularly rural and regional Australia, that the magnitude, significance and contribution of this industry is recognised and factored into the Government's economic, industrial and trade policies.

Throughout the COVID-19 pandemic, the food and grocery manufacturing sector proved its essential contribution to Australian life. Over this time, while our supply chains were tested, they remain resilient but fragile.

The industry has a clear view, outlined in *Sustaining Australia: Food and Grocery Manufacturing 2030*, of its role in the post-COVID19 recovery through an expansion of domestic manufacturing, jobs growth, higher exports and enhancing the sovereign capability of the entire sector.

This submission has been prepared by the AFGC and reflects the collective views of the membership.

RECOMMENDATIONS

The AFGC recommends the following:

- The Department undertake targeted consultation with relevant industry experts when establishing final FMD-specific biosecurity conditions to ensure measures are commercially feasible, including consideration of the full FMD virus thermal death time curve.
- The Department develops detailed guidance to support individual (case-by-case) assessment for imported dairy products or manufacturing countries/supply chains that may use alternative systems-based approaches to mitigate biosecurity risks in line with Australia's ALOP.

OVERVIEW AND GENERAL COMMENTS

The AFGC welcomes the opportunity to comment on the Department of Agriculture, Fisheries and Forestry's (the **Department**) *Import risk review for dairy products for human consumption: second draft report*¹.

The AFGC understands that this draft risk review aims to modernise Australia's dairy import conditions to reflect the current and future trading environment. It considers new and relevant peer-reviewed scientific information, international standards, relevant changes in industry practices, and operational practicalities. Only dairy products for human consumption manufactured from milk obtained from domestic cattle, water buffalo, sheep and/or goats are included. It does not include dairy products imported for personal use (personal consignments), as food samples, or retorted dairy products.

The AFGC strongly affirms its support for effective biosecurity measures to protect both Australia's population, economy, and environment.

The AFGC shares the Department's view that a strong biosecurity system is critical to protecting Australia's economy, environment, and way of life.

Australia is an open and developed economy that is critically reliant on the import of products and inputs to fulfill the broad population needs. In the food manufacturing sector alone, the country is reliant on imports of specialist ingredients and other food components (food additives, colouring, flavouring, and processing aids) for the very diverse food supply which Australians currently enjoy.

The AFGC strongly supports the setting of scientifically based risk management measures that reduce the risk associated with the importation of dairy products into Australia to achieve Australia's appropriate level of protection (**ALOP**). The Australian food industry is operating in a global market where risk proportionate biosecurity measures has increasing importance in facilitating the two-way trade in food and food components.

¹ Have your say – Review of the biosecurity risks of imported dairy products
<https://app.converlens.com/agriculture-au/review-biosecurity-risks-imported-dairy-products>

SPECIFIC COMMENTS

DISEASE AGENT-SPECIFIC ANIMAL BIOSECURITY MEASURES

Lumpy skin disease virus (LSDV)

The AFGC supports and compliments the Department on the amending the risk management advice in response to new scientific data demonstrating that HTST pasteurisation is sufficient to inactivate LSDV in milk and is therefore managed by the minimum requirements.

Foot-and-mouth disease virus (FMDV)

For all dairy products (except for cheese) imported from countries not on the Department's FMD-Free Country List, the Department has proposed the following additional heat treatments:

- application of a thermal moist heat treatment process to the milk or the dairy ingredients involved. For example, moist heat treatment to reach a core temperature (or even heating throughout in the case of liquid product) of no less than 100°C and retained at such temperature for no less than 30 minutes, or
- application of a thermal moist heat treatment of not less than 148°C and retaining at such temperature for no less than 3 seconds.

The AFGC notes that the Department have retained the proposed heat treatments from the first draft report. The main reasons the Department provided for retaining import conditions more conservative than prescribed in the World Organisation for Animal Health (WOAH) Animal Health Terrestrial Code were²:

- i. the department is aware that feeding dairy products imported for human consumption to livestock is a common occurrence; and
- ii. there is scientific evidence that demonstrates that the WOAH recommendations are not enough to adequately manage the risk of FMD in dairy products. This evidence is summarised within the FMD risk review chapter of the draft report.

The practice of repurposing dairy (or other) products imported for human consumption to livestock feed is outside the scope of this review, however, the AFGC considers further stakeholder engagement is required to clarify and communicate requirements for this risk pathway.

² DAFF. Import risk review for dairy products for human consumption - Response to submissions received from the first draft report. April 2024. <https://www.agriculture.gov.au/sites/default/files/documents/response-first-draft-report-submissions-dairy-ra.pdf>

Regarding thermal treatment, dairy-containing products can be processed with a variety of systems and temperature/time profiles depending on their properties (e.g. protein and fat levels, pH, viscosity) and the customer/consumer requirements. If the product and process doesn't match, issues with the equipment (e.g. fouling) and the product (e.g. sensory/physical and nutritional aspects) can be expected.

The conditions currently proposed by the Department limit industry to two prescribed heat treatments, which are at the extremes of the FMDV thermal death time (TDT) curve.

Advice from technical experts at AFGC member companies is that treatment of milk to the times and temperatures proposed by the Department are not commercially feasible and would result in a product that is not acceptable to the consumer. These temperatures would result in significant denaturation of milk proteins risking potential fouling of equipment (blocked product lines), degraded sensory properties of the product (cooked/burnt flavour) and be detrimental to heat sensitive vitamins and other nutritional components.

For dairy powder, advice is that a maximum of 120°C for 3 mins is the most that could be practically applied in most plants, however these time/temperatures would destroy the finished product; functionally and nutritionally.

Of the two main types of UHT processes (direct and indirect), the industry has heavily invested in indirect processes (plate or tubular heat exchangers) for efficiency and practical reasons. Advice from industry experts is that the proposed heat treatment requirement of 148°C for 3 seconds is not achievable with the commonly used indirect UHT systems.

Treatment of dairy to the Department's proposed UHT conditions would also likely result in milk products not meeting Codex quality standards³, with scorched particles scale D and solubility index > 1 ml, leading to potential trade limitations.

Overlaying the results of de Leeuw & van Bakkum (1979)⁴ and Cunliffe et al. (1979)⁵ on the TDT curve for FMDV in milk as determined by Walker et al. (1984)⁶ identifies five different temperature and time combinations which demonstrated FMDV inactivation in both skim and whole milk during UHT treatment (copy of TDT curve provided below).

³ Codex Standard for Milk Powder and Cream Powder (CXS 207-1999)

⁴ de Leeuw, P.W. and van Bakkum, J.G. (1979) Some aspects of foot-and-mouth disease virus in milk (Appendix C.4), paper presented at the 1979 session of the Research Group of the Standing Technical Committee of the European Commission for the Control of Food-and-Mouth Disease (EuFMD), Lindholm, Denmark 12-14 June, Food and Agriculture Organization of the United Nations, Rome.

⁵ Cunliffe, H.R., Blackwell, J.H., Dors, R. and Walker, J.S. (1979) Inactivation of milkborne food-and-mouth disease virus at ultra-high temperatures. *Journal of Food Protection*, Vol 42, pages 135-137.

⁶ Walker, J.S., de Leeuw P.W., Callis J.J. and van Bakkum, J.G. (1984) The thermal death time curve for foot-and-mouth disease virus contained in primarily infected milk, *Journal of Biological Standardization*, vol 12, no.2, pp. 185-9.

To provide further flexibility (until further scientific data on the inactivation of FMDV in dairy products during thermal processing becomes available), the AFGC suggests the Department considers the full TDT curve demonstrated by Walker et al. (1984) when establishing the final FMD-specific biosecurity conditions. Some these alternative time/temperature profiles may be more achievable conditions for indirect UHT systems.

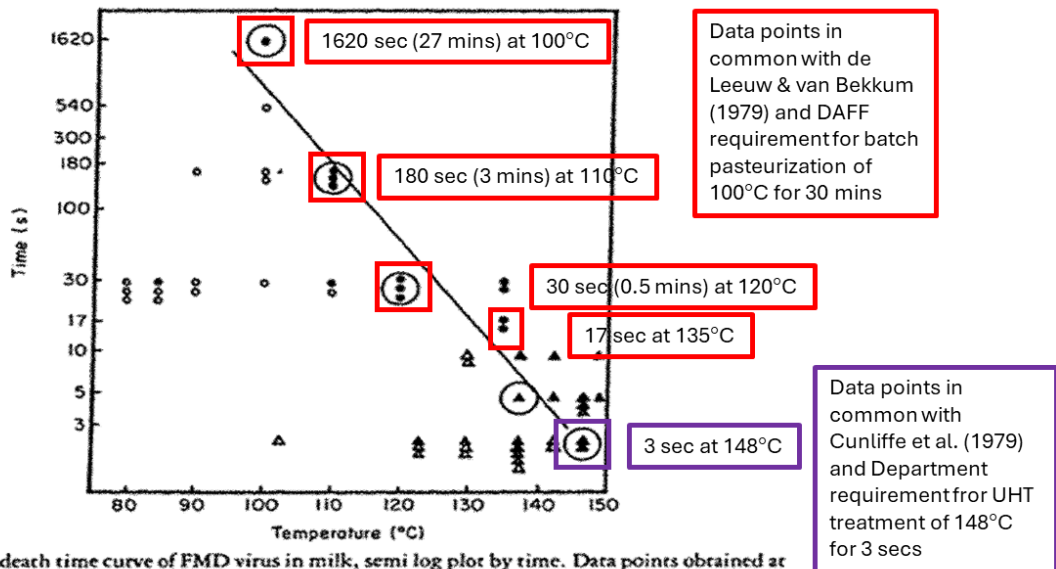


Fig. 1. Thermal death time curve of FMD virus in milk, semi log plot by time. Data points obtained at the CVI: ●, FMD-virus inactivated; ○, FMD-virus survived. Data points obtained at the PIADC: ▲, FMD virus inactivated; △, FMD virus survived. Points ⊙, ⊕ used to hand fit line for thermal death time curve.

From: Walker et al. (1984)

The five time and temperature profiles recorded in the scientific literature as sufficient to inactivate FMDV in milk, as cited by the Department, are:

- 27 minutes at 100°C
- 3 minutes at 110°C
- 0.5 minutes at 120°C
- 17 sec at 135°C
- 3 seconds at 148°C

In summary, the AFGC recommends that the Department undertake further targeted consultation with relevant industry experts to assist with establishing commercially feasible time/temperature conditions that mitigate the risk to Australia’s ALOP.

Recommendation

The Department undertake targeted consultation with relevant industry experts when establishing final FMD-specific biosecurity conditions to ensure measures are commercially feasible, including consideration of the full FMD virus thermal death time curve.

Risk Assessment and Management

Assessment of alternative biosecurity measures

The AFGC notes the Department's advice that:

"The dairy Import Risk Assessment (IRA) also considered the importation of dairy products from countries/zones not free from FMD, subject to individual assessment and provided that the dairy products were manufactured (under specified controls) from raw materials obtained in an FMD-free country/zone or were processed in a manner that would be expected to inactivate FMDV."

The AFGC supports the Department's current policy to consider individual assessment for imported dairy products (as described above) that may use alternative systems-based approaches to mitigate biosecurity risks in line with Australia's ALOP. The ability for the department to undertake case-by-case assessments and consider alternative manufacturing country/supply chains is also elaborated in the 'frequently asked questions' on the Department's website.⁷

Imported dairy ingredients, or ingredients that contain dairy components (such as food additives, processing aids), are extensively used in the manufacture of food in Australia. As FMD and other listed diseases spread globally, supply chains will become restricted leading to potential shortages, particularly for highly specialised foods and ingredients (e.g. foods for special medical purposes).

Noting the technical limitations of meeting the proposed heat treatment conditions for certain products, it is imperative that risk-based alternative measures remain available to industry to maintain supply while still achieving Australia's ALOP. Development of detailed guidance on this process is important to ensure industry can provide relevant information in a timely and comprehensive manner to support the Department's assessment of alternative conditions if/when these circumstances eventuate.

Recommendation

The Department develops detailed guidance to support individual (case-by-case) assessment for imported dairy products or manufacturing country/supply chains that may use alternative systems-based approaches to mitigate biosecurity risks in line with Australia's ALOP.

CONCLUSION

The AFGC would welcome the opportunity for further industry dialogue with the Department as it develops the final import conditions.

For further information about the contents of this submission contact:

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⁷ DAFF. Import risk review for dairy products for human consumption - Frequently asked questions. April 2024. <https://www.agriculture.gov.au/sites/default/files/documents/faqs-dairy-products-human-consumption-risk-analysis.pdf>