

DAIRY TRACEABILITY WORKING GROUP

Report A:

Proposed Regulatory
Requirements for Traceability

December 2014

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Key terms -

Term	Definition
APEC	Asia Pacific Economic Cooperation
Batch	An homogenous quantity of material with the same characteristics.
Clean in place (CIP)	Refers to cleaning the interior of dairy processing equipment (such as milk silos) without requiring disassembly.
Critical tracking events (CTE)	Events that must be recorded in order to allow for effective traceability of products in the supply chain. Including those instances where product is accumulated or segregated, moved between premises, is transformed, or is otherwise determined at a point at which data capture is necessary to trace a product.
Food Safety Programme (FSP)	As defined under the Food Act 1981, a Food Safety Programme is designed to identify and control food safety risk factors in order to establish and maintain food safety. Such factors may relate to the production, manufacture, preparation, packaging, storage, handling, transport, distribution, or sale of food.
FSANZ	Food Standards Australia New Zealand develops and administers the Australia New Zealand Food Standards Code, which lists requirements for classification and permitted naming of food items, permitted foods such as additives, food safety, labelling and genetically modified foods.
Key data elements (KDE)	The data captured during a Critical Tracking Event to support a successful traceability process.
Lot	A quantity of material produced under consistent process conditions.
Master data	<p>Master data describes each item and party involved in supply chain processes and is defined as data having the following characteristics:</p> <ul style="list-style-type: none"> • Permanent or lasting nature • Relatively static, not being subject to frequent change • Accessed/used by multiple business processes and system - applications - <p>Can either be neutral or relationship dependent. -</p>
MPI	The Ministry for Primary Industries.
Product ID	A numerical value used to uniquely identify a traceable item, ie a physical object that may or may not be a trade item, where there may be a need to - retrieve information about its history, application, or location. The level at - which the traceable item is defined is dependent on the industry and degree - of control required (eg within a product packaging or logistical hierarchy). It - could exist in multiple locations at the same time (eg if identified at both the - trade item and batch level). A traceable item may be related to another - traceable item. -
Recall	A food recall attempts to remove food from distribution, sale and consumption in order to protect consumers from harm where product is not - fit for purpose. -

Term	Definition
Risk Management Programme (RMP)	A programme under the Animal Products Act 1999 designed to both identify, and control, manage, and eliminate or minimise hazards and other risk factors in relation to the production and processing of animal material and animal products in order to ensure that the resulting animal product is fit for intended purpose. -
Serialisation	The process of applying a unique serial number to a specific occurrence of a product. This may be applied at different levels (eg batch, lot, logistics unit), as well as to bulk packaging such as containers or pallets, or to individual consumer-ready product such as tins or sachets. -
Stock Keeping Unit (SKU)	An internal number or code used to identify a product within a company. It may be unique within a company, but NOT globally unique and not recommended for traceability. -
Traceability	The ability to track forward the movement through specified stage(s) of the extended supply chain and trace back the history, application or location of the product under consideration. -
Traceability data	Any information about the history, application or location of a traceable item. This may be either master data or transactional data. -
Traceability processes	Refers to the overarching requirements and practices related to traceability.
Traceability system	Refers to any system an individual business may have in place to implement the proposed traceability processes. -
Tracing back	The ability to identify the origin attributes, or history of a particular traceable item located within the supply chain by reference to records held. - The preferred terms in this document are “tracing back” and “tracking forward”. -
Tracking forward	The ability to follow the path of a traceable item through the supply chain as it moves between traceability participants. -
Trade item	Any item (product or service) for which there is a need to retrieve pre-defined information and which may be priced, ordered or invoiced at any point in any supply chain. -
Transactional data	Transactional data describes time bound events (usually relevant in transportation). -
Withdrawal	A food withdrawal, which is different from a food recall, removes food from the supply chain for reasons that may be other than protection of public health and safety, eg food labelled as 200 grams weighs only 150 grams. -

1. Executive summary -

1.1 Context

The Dairy Traceability Working Group (the Working Group) was established at the request of the Minister for Food Safety to implement one of the recommendations of the December 2013 report of the Government's Inquiry into the Whey Protein Concentrate (WPC) Contamination Incident (the Inquiry), namely (i) to consider the most appropriate regulatory provisions for traceability of dairy products, and (ii) to consider a code of practice or similar to guide industry in implementing these requirements. The Working Group's Terms of Reference are attached to this document, and its membership list is attached in Appendix 1.

While the Inquiry found that the WPC incident was not reflective of any crisis or failure in New Zealand's food safety regulatory system governing the dairy industry, it did serve to shine a spotlight on the critical importance of New Zealand having – and being seen internationally to have – a strong food safety culture. The reports of the Working Group are intended to support the process of continuous improvement of that culture. Best-practice in traceability is not static, and New Zealand's interests are best served by playing a role in how this evolves rather than remaining content to be an industry "follower".

The Working Group is of the view that its recommendations for enhancing the current regulatory regime for traceability will put the New Zealand dairy industry in a sound position to face the challenges in the years ahead. The accompanying best-practice industry guide is intended to assist the industry implement these regulatory requirements across the board. The Working Group believes that full implementation as soon as possible will provide competitive commercial advantage to New Zealand dairy companies while also enhancing our reputation as a leading producer of food and food products.

Part A of the Inquiry is being undertaken in parallel with the Working Group's activities and its findings may require MPI to revalidate some of the findings of this report.

1.2 Scope of the report

This report addresses the first part of the Working Group's mandate. It identifies the primary purpose of traceability, as well as indicating other areas where best-practice traceability processes can support other objectives. A simplified model of the New Zealand dairy supply chain is used to identify a number of core principles to form the basis for a comprehensive framework of legislative and regulatory provisions to govern traceability. In turn, these are used to develop a number of specific regulatory requirements. The report also includes a number of further steps to be taken to progress its recommendations.

1.3 Proposed regulatory requirements for dairy traceability

In addressing the first part of the Working Group's mandate, this report proposes a number of new regulatory requirements that will strengthen New Zealand's dairy regulatory system. These comprise in summary:

1. - Provision for full chain traceability from farm gate to consumer through an interoperable "one up, one down" system.
2. - A requirement that traceability information be provided electronically on demand to the Ministry for Primary Industries (MPI) or an independent verifier. It is expected that this be achieved as a

business-critical event with information being provided as quickly as practicable in a standard data format that is directly accessible and intelligible. This should be within 24 hours or as specified¹.

3. - A requirement that companies hold practical tests of traceability processes to supply the information required for mock recall and these be independently verified or audited where a product recall has not taken place in the past 12 months.
4. - Proposals for the revised traceability requirements and related industry best-practice guide to be reviewed three years after implementation, or earlier should a significant traceability event negatively affect Brand New Zealand.
5. - That the best-practice guide be promoted through a strategic partnership with an industry group such as the Dairy Companies Association of New Zealand (DCANZ).

This document and the best-practice guide form a comprehensive response to the recommendation of the Inquiry. The Working Group recognises that any implementation of its recommendations will involve industry consultation during the standard regulation development process. Implementation may be incremental rather than 'big bang' due to significant investments in legacy systems and processes.

1.4 Proposals for other work

In the course of undertaking its work, the Working Group has identified some areas outside its Terms of Reference where further work should be considered. These are proposals for:

- (a) -the Dairy Capability Working Group to consider the capability of the dairy industry to sustain best-practice traceability over the long-term, to support a strong food safety culture in New Zealand.
- (b) -a separate study on how to reduce the risk of counterfeiting/improving confidence in the - authenticity of New Zealand products. -
- (c) -a separate review of on-farm record-keeping to be undertaken to ensure that robust traceability behind the farm-gate and interoperability with "downstream" traceability processes are achieved.
- (d) -consolidating the various existing regulatory requirements related to traceability (excluding country specific export requirements) to assist transparency and support greater ease of application.
- (e) -MPI should take an early opportunity to engage with China to explore how the exchange of - traceability information between the two countries might be progressed. -
- (f) - MPI should undertake periodic tests of interoperability of traceability information across the supply chain.
- (g) -MPI to review any of its guidance material related to traceability (eg on recalls) in light of the Working Group's report.
- (h) MPI and industry should work in partnership to implement pilots of the proposed regulatory requirements and best-practice guide.
- (i) - MPI and the dairy industry should monitor international developments and best-practice in - traceability and share information as appropriate. -
- (j) - New Zealand government agencies and industry to develop and implement a strategic action plan to encourage, within APEC and other international forums, the introduction of agreed global standards and interoperable traceability processes in all aspects of international trade in food and food products.

¹ Exceptionally, MPI or the verifier may determine that circumstances are such that more or less time is necessary.

- (k) -MPI and the dairy industry should encourage dairy exporters to endeavour to include a requirement in their contracts with their offshore partners (including customers and logistics providers) that they operate as a minimum a 'one up, one down' traceability process.
- (l) - MPI and the dairy industry to monitor closely the development of interconnected traceability processes based on distributed data sources.
- (m) MPI to ensure that traceability (and, to the extent possible, global interoperability of traceability information) is taken into account when implementing new information systems.

2. Introduction

2.1 Background

The August 2013 whey protein concentrate (WPC) contamination incident threatened New Zealand's hard earned reputation as a trusted supplier of safe and suitable food. While the incident ultimately proved to be a false alarm, the tracing of potentially affected products took a long time.

Following the incident the Government Inquiry into the WPC Contamination Incident (the Inquiry) was established. Parts B and C of the Inquiry were completed in December 2013 – a consideration of the regulatory and best-practice requirements governing food safety and how they compare against similar jurisdictions. The Inquiry found that New Zealand's food safety regulatory model is consistent with international principles and among the best in the world.

While the current system continues to be well regarded², the Government has committed to strengthening the food safety system by implementing all the Inquiry's recommendations – including the establishment of the Dairy Traceability Working Group (the Working Group). To respond to the challenges of the 21st century, New Zealand needs to ensure its dairy traceability regulatory requirements and processes are consistent with international best-practice, cost-effective, technically feasible, and able to handle increasingly complex supply chains. Systems that meet these requirements will provide enhanced food safety and assurances around food products to New Zealand's consumers and customers.

2.2 The Dairy Traceability Working Group

The primary objective of traceability processes is to rapidly identify the quantity and location of food in the supply chain and facilitate an effective recall and/or withdrawal of product if unsafe or not fit for purpose. This will support market access and supply chain assurance.

The Working Group has been formed to undertake two key tasks:

1. - Consider the most appropriate regulatory provisions for traceability of dairy products, which, consistent with the scheme of the Animal Products Act 1999, should be outcome-based (ie "what" must be achieved); and
2. - Consider a code of practice or similar to guide industry in implementing the requirements (ie "how" to achieve it).

² "New Zealand authorities had acted swiftly and effectively, exhibiting a level of detail, commitment to communication, and sophistication that confirmed FDA's assessment of their food safety system. The New Zealand authorities brought the same care to notifying other countries that had received the recalled product, as well as any other product that contained the whey protein as an ingredient." – United States Food and Drug Administration <http://blogs.fda.gov/fdavoices/index.php/tag/new-zealand/#sthash.Y69xNGyo.dpuf>

The Working Group is conscious that while these tasks relate to the dairy sector, the work undertaken will also be of interest to other sectors.

The Working Group has set itself the aspirational goal of developing proposals and guides to assist building world-class dairy traceability processes that are robust and sufficiently forward-looking to meet likely future requirements. The Working Group is also mindful that because its revised regulations and a best-practice guide have been developed to handle the most complex of scenarios (eg highly processed multi-ingredient products with complex supply chains, such as infant formula) they will also be able to handle simpler situations (eg cheeses made for local consumption by a small manufacturer).

The Working Group has produced two documents. The first – this report – sets out proposals for regulatory changes that will strengthen New Zealand’s traceability processes. The second document has been developed to give dairy industry participants guidance as to how to implement best-practice traceability processes. It is not intended to be mandatory but participants who follow the guide can be confident that they will be following best-practice. Collectively, it is in the interests of the New Zealand dairy industry as a whole (as well as other primary industries) for its processes to be such that they engender in our trading partners and global customers full confidence and trust. The Working Group accordingly urges all dairy industry participants to work towards adopting its recommendations for best-practice as soon as practicable.

3. How does traceability apply?

3.1 Challenges in the dairy sector

The Working Group considers that the ultimate aspiration for world-class dairy traceability processes is to be able to identify the current location of every product virtually instantaneously, including the source of all inputs and every step in the complete supply chain, from farm input to the ultimate consumer. Although there are some extant standards and technologies designed to deliver this kind of supply chain visibility and traceability, real-life implementation of these in the New Zealand dairy industry is still at a ‘proof of concept’ stage. Further complications are, first, as discussed in section 4.1, the New Zealand Government has no power to compel off-shore companies to act, and, second, it is difficult to envisage for the foreseeable future how the informal economy (eg a milk powder vendor in a remote village in a developing country) might be brought into traceability processes, even if the first issue were to be resolved.

The complexity of the dairy industry presents challenges due to the physical nature of the product and how it is transformed into a wide variety of dairy products. Milk and its products may undergo several transformations in either a single plant or in multiple plants, the latter being either solely in New Zealand alone or overseas. Product may also be re-imported for further processing (see indicative diagram in section 4.2). Further, product may be sold either in bulk or in final consumer packs, and it can be both final product or ingredients for further processing.

Nonetheless, New Zealand should strive to ensure international best-practice traceability processes are adopted across the dairy industry. In practical terms, this means a shift to a ‘pasture to plate’ mentality, increased capabilities, and processes that are cutting-edge and fit-for-purpose for today, and that establish a sound foundation for future enhancements as technology, international best-practice and global rule-making evolve. New Zealand needs to continue to be a leader in this area.

A key Inquiry recommendation was for the government and industry to work together to foster a positive food safety culture throughout the dairy sector. The Working Group is mindful of the complementary nature of a strong food safety culture and best-practice traceability. It will be essential that industry capabilities in this area are reinforced and developed further where necessary.

Recommendation (a): The Working Group recommends that the Dairy Capability Working Group consider the capability of the dairy industry to sustain best-practice traceability over the long-term, supporting a strong food safety culture in New Zealand.

Consideration of traceability processes leads to discussions around a number of related fields, such as food safety, food fraud and food security. The Working Group has also considered some of these issues in the sections below.

3.2 The role of traceability processes in managing risk

Good traceability processes will facilitate a timely recall decision and subsequent risk reduction of injury for consumers and brand damage for companies. The amount of food safety risk in a product can vary depending on the nature of the product (eg raw milk is riskier than pasteurised milk), handling of the product, the maintenance of standards during processing (and the techniques employed), the extent of distribution, and the consumer of the product (both how it is prepared and who consumes it, eg infants).

In its consideration of traceability, the Working Group examined the process of product recall. This usefully clarified key issues and concepts. While traceability has importance beyond recall decisions alone, the Working Group considers it useful to append the flow chart developed as an aid to its thinking (Appendix 2).

By enabling timely recall decisions, traceability processes will support the management of other types of risk, such as risks to New Zealand's reputation as a provider of safe and suitable food.

3.3 New Zealand reputational considerations

The WPC incident demonstrated how a single issue affecting a high-profile New Zealand product can play across very quickly into broader perceptions about the safety and quality of New Zealand products, even in sectors not directly connected with the product in question. In today's world of fast-moving social media, bad-news stories travel fast, but later reassurances may not. Trust in New Zealand's products internationally has been hard-won over many years, but it can be quickly lost if risks are not managed appropriately. Robust traceability processes can usefully support "Brand New Zealand" but are not sufficient in themselves to be able to guarantee the quality and authenticity that is critical to maintaining trust in New Zealand's brand, a quality that is a core New Zealand Inc interest. Nevertheless, regulator-independent verification of supply-chain integrity will enhance positive views of New Zealand and its products.

3.4 Counterfeiting -

Comprehensive traceability processes are important in helping determine whether a given product is authentic by allowing for tracing back through the supply chain, which *inter alia* establishes its provenance. However, the Working Group considers that while traceability processes can help to provide confidence in the integrity of supply chains, they cannot in themselves prevent counterfeiting. It is accepted that successfully preventing counterfeiting is a complex and multifaceted problem that, *inter alia*, also requires comprehensive control of the supply chain.

The issue of counterfeiting is also wider than the dairy sector and food in general. For these reasons, the Working Group has not included the prevention of counterfeiting as one of the objectives of the traceability processes it is seeking to develop. It is, however, mindful that widespread introduction of international best-practice traceability processes will support proof of authenticity.

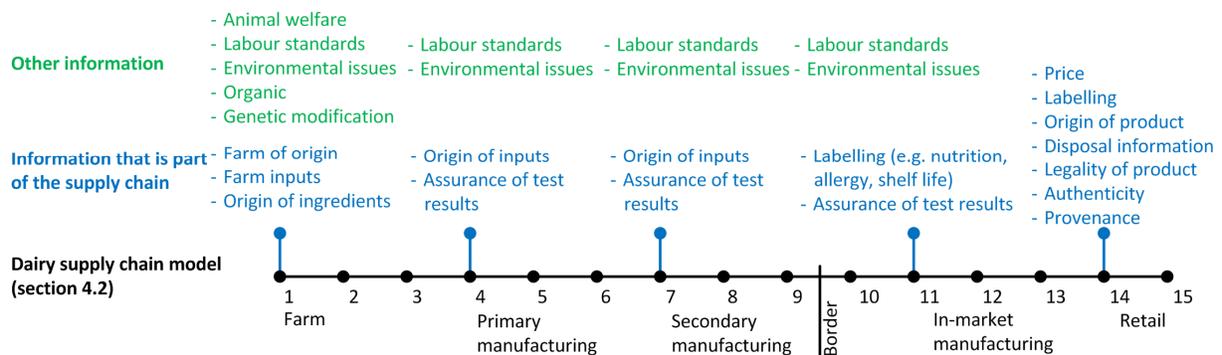
Recommendation (b): The Working Group proposes that a separate study be undertaken on how to reduce the risk of counterfeiting/improving confidence in the authenticity of products.

3.5 Increasing transparency demands from consumers and customers

Consumers and customers are increasingly seeking information and assurances when making purchasing and/or import decisions. It is recognised that to satisfy this need information "upstream" from the final consumer product is required or necessary. The information sought can reflect values eg information on animal welfare on originating farms or confirmation of organic status. This interest from consumers and customers is known as transparency.

Figure 1 below provides an indication of the information types that can be of interest in various parts of the supply chain.

Figure 1: Indicative transparency information of interest to consumers and customers



The data underpinning best-practice traceability processes may assist companies in being able to provide some of the above types of information to consumers and others requiring it. As is the case with counterfeiting, the Working Group is of the view that traceability processes should support and not hinder the development of reliable end-to-end supply chain information to those requiring it.

4. The New Zealand dairy supply chain -

4.1 Scope of work

The Working Group has given considerable thought to the scope of its work. There was ready agreement in principle that the focus should be on a full supply chain model (ie from farm to processor(s) to intermediate(s) to final end-user). In practice, however, a number of constraints have been identified that will impose limitations. First, where the supply chain includes off-shore components, the New Zealand Government has no power to compel off-shore companies to act (either by legislation or regulation) and access to the necessary traceability data is dependent either on importing-country requirements or on such contractual arrangements that may be agreed among exporter, importer and retailers (who often make the “consumer guarantee” of food safety and trust). In that context, the Working Group is aware of new regulations introduced by the European Union on “distance selling” (EU 1169) that may in part assist in the enhancement of collaboration between suppliers and those that sell to the ultimate consumer.

A second issue is to determine at what point should the supply chain be deemed to start, namely at the farm gate or behind the farm gate. Best-practice traceability processes need to start at the origin of ingredients, which in the dairy context means all inputs and activities undertaken on the farm. It is clear that farm inputs (eg food and feeds, agricultural chemicals, veterinary medicines, health status of animals, certification status of land, etc) can be a cause for subsequent product recall/withdrawal. It is also the case that New Zealand’s reputation depends to a significant degree on assessments of its on-farm activities and practices, which suggests that a robust traceability regime must lead back behind the farm gate.

The Working Group considers that, as constituted, it does not have the representation or expertise required to evaluate the adequacy or otherwise of current on-farm record-keeping requirements. It recommends, therefore, that a separate review be undertaken of on-farm record-keeping with a view to ensuring that there can be confidence that full behind-the-farm-gate traceability can be effected when necessary and can link directly with the traceability processes recommended in this report to allow a seamless link from behind the farm gate to after the farm gate. The Working Group recognises that the findings of such a review could require some revalidation of some of its recommendations.

The production of raw milk is a clear point of discontinuity (ie the cow can be seen as a factory in the field), and it can therefore be argued that milk passing through the farm gate represents a logical starting point for dairy traceability processes linked to the ultimate end-user. It is at this point that batches of consistent quality product (pooled milk) are established and can be tracked.

The Working Group has accordingly come to the view that, given its membership, its work should begin at the point that raw liquid milk enters the initial collection point on the farm. This is on the premise that dairy traceability processes can effectively and efficiently trace upstream to the farm when required, and that the farm’s records, as required under legislation³, are adequate to identify all farm inputs.

Recommendation (c): The Working Group proposes that a separate review of on-farm record-keeping⁴ to be undertaken to ensure best-practice traceability processes behind the farm-gate and interoperability with “downstream” traceability processes are achieved.

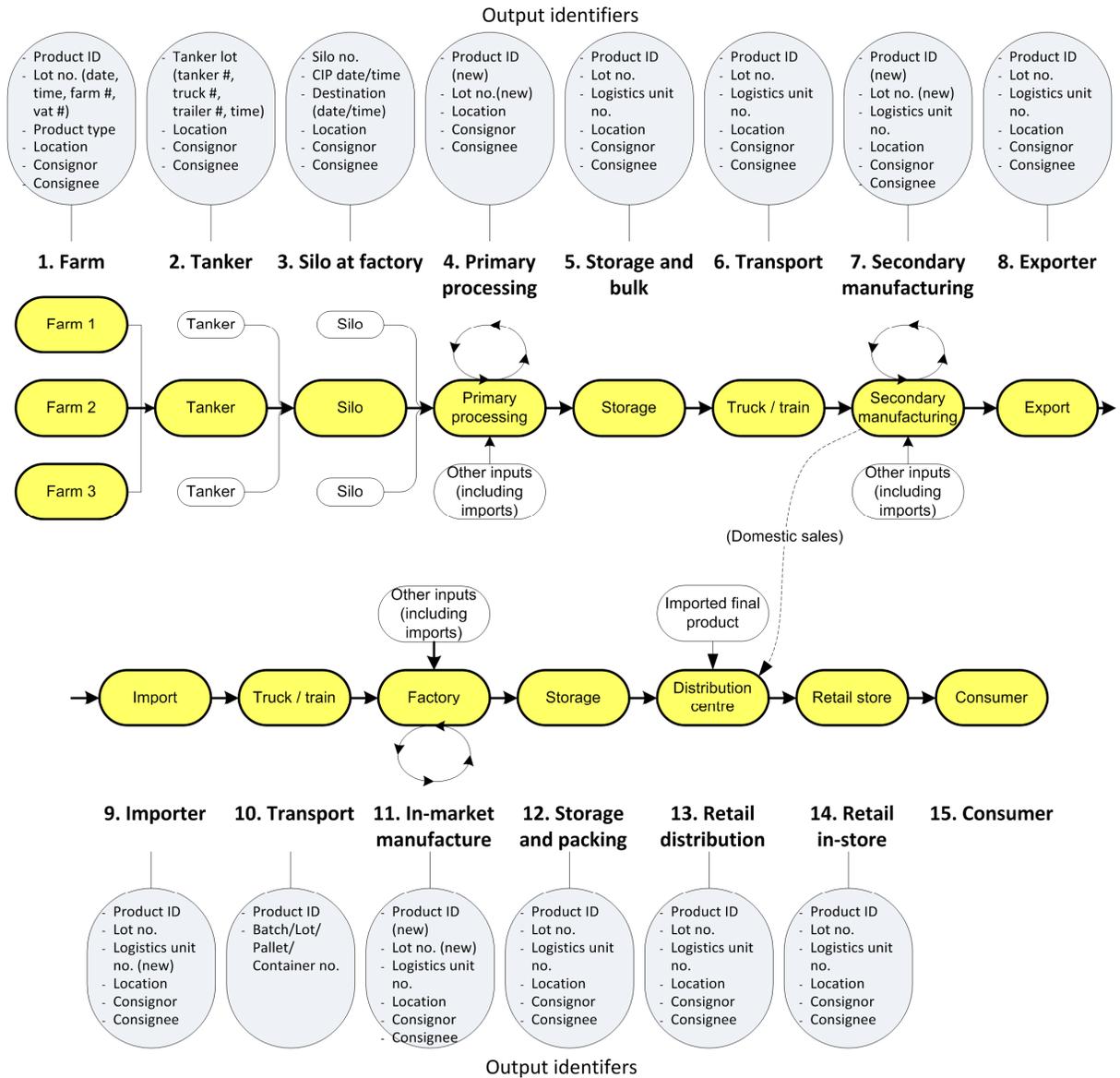
³ Such as the Animal Products Act 1999 and the Agricultural Compounds and Veterinary Medicines Act 1997.

⁴ Including inputs such as animal identifiers, fertilisers, feeds, agricultural compounds and veterinary medicines. Consumer demand may lead to other elements such as the environmental status or animal welfare being included.

4.2 A high-level model of the dairy supply chain -

To consider the strengths and weaknesses of New Zealand’s dairy supply chain the Working Group has applied a high-level model of key stages involved. This model provides for a complex situation involving milk collection, transport, manufacturing within New Zealand, off-shore manufacturing and retail sale to consumers. In practice dairy supply chains can have additional complexities such as the repetition of steps or multiple export/import steps, and are rarely as linear as this simplified scheme suggests. A corollary is that not every supply chain will comprise as many steps as are shown in the diagram below.

Figure 2: High level model of the dairy supply chain



4.3 Product visibility throughout the dairy supply chain -

All participants in the dairy supply chain must take into account the ultimate safety of consumers. As the end-to-end system can only be as strong as its weakest link, it is therefore critical that all participants have a mindset that encompasses a full understanding of their responsibilities and accountabilities. This requires participants to understand how their traceability data may be required to trace back or track forward product along the entire supply chain.

In respect to the domestic New Zealand supply chain, dairy is no different from any other food item where the “one up, one down” system (tracing back where product has come from and tracking forward where product has gone) operates. In particular, participants in the supply chain have access to the voluntary Product Recall online portal administered by GS1.

Currently, product visibility throughout the entire supply chain is limited to the product level, meaning defective product can be quarantined quickly, but not at the batch level. Although batch visibility is common within manufacturing processes, it is not universally captured in distribution and retailing systems, given the number of products in the system at any one time. As a consequence, traceability is a less targeted process than one that could be provided by batch level visibility. Accordingly, in a product recall or withdrawal event greater quantities of fit-for-purpose product need to be included in order to ensure complete removal of affected items from the supply chain to ensure food safety. Full implementation of the recommendations of this report will help address these issues.

5. Current regulatory requirements for traceability

5.1 New Zealand requirements

Dairy processing is regulated by the Animal Products Act 1999, which focuses on the processing and production of animal material and animal products. The Animal Products Act regime places responsibility for risk management on producers, processors and storage and transport operators, and aims to give industry the flexibility to innovate, while continuing to assure food safety.

Industry must operate under a risk management programme (RMP) registered with MPI that is specific to a particular operator’s business, setting out how that operator will identify, control and eliminate hazards and other risk factors in its production, processing and transportation of safe food. It also sets out processes for record-keeping and product recall. Dairy processing can also take place under a Food Safety Programme (FSP) in terms of the Food Act 1981 if the product is produced only for the New Zealand or Australian markets⁵. The practical effect is the same whether an operator has an RMP or an FSP.

Regulatory requirements for dairy are detailed in regulations, notices, standards and guidance issued under the Animal Products Act. Appendix 3 provides key excerpts of the current requirements that relate to traceability. The fragmented nature of existing traceability requirements is confusing and it is preferable that these requirements be consolidated. This is likely to benefit other sectors, as well as the dairy industry.

Recommendation (d): The Working Group recommends that all the various existing regulatory requirements related to traceability (excluding country-specific export requirements) be consolidated to assist transparency and support greater ease of application.

⁵ From 1 March 2016, dairy processing will be able to take place under a Food Control Plan under the Food Act 2014.

Key aspects of New Zealand’s current traceability requirements for dairy include:

- A “one up, one down” system identifying and tracing dairy products and ingredients in both - directions in the supply chain; -
- Products for export to be identified with information on premises, specification/product description, date of manufacture, weight/quantity, species, country eligibility, and sub-lot range; and
- Dairy processors must keep records of raw-milk suppliers, their locations and amount of milk supplied.

New Zealand’s approach to regulation has over many years been on the premise that rules should be based on science, sound risk assessment and be as minimally prescriptive as possible to achieve the desired objectives. As such, legislation and regulation provide a minimum standard that the industry must meet, and, accordingly, some aspects will need to be prescriptive. In addition to meeting the needs of the industry regulator, individual companies will need also to bring commercial considerations to bear. These may lead to additional elements being introduced into traceability processes. It is open to the industry to seek to have these incorporated into regulations and codes of practice, in order to ensure that the sector as a whole follows international best-practice.

5.2 International requirements

While there are international standards for traceability⁶, regulatory requirements vary across countries and regions. GS1 New Zealand Inc provided the Working Group with an outline of the range of international requirements that exist in some of New Zealand’s key markets, a high-level comparison of which is provided below.

Table 1: High-level comparison of traceability requirements in some key markets

Requirement	Australia (FSANZ) Food Standards Code	Canada Safe Food for Canadians Act (and proposed regulations)	European Union Regulation (EC) No 178/2002 on General Food Law	United States Bioterrorism Act
	One up, one down	One up, one down	One up, one down	One up, one down
How long records should be kept	Not specified	3 years	Not specified (but 5 years suggested in guidance)	Not more than 2 years
Minimum response time for information	Not specified	24 hours after request or shorter time limit specified if there is risk of injury to human health	On demand	As soon as possible, not to exceed 24 hours after request
Format of information	Not specified	In a format that standard commercial software can manipulate, or if on paper is legible without external aids	Not specified	Any format

⁶ Such as Codex ‘Principles for traceability/product tracing as a tool within a food inspection and certification system’, and ISO 22005 Traceability in the feed and food chain – General principles and basic requirements for system design and implementation).

The Working Group is aware that regulations for traceability under the United States Food Safety Modernization Act are currently being developed. The United States Food and Drug Administration has commissioned pilot studies which have resulted in a number of recommendations being put forward to amend and extend its original proposals. If these recommendations are adopted, it is likely the United States traceability regime will be strengthened.

China is also moving towards introducing a new legal framework governing trade and commerce in dairy products. These emerging requirements may draw on similar provisions in markets such as the European Union and United States. When China chooses to implement these new requirements, New Zealand exporters will need to adapt to them as appropriate.

New Zealand and China have also recently agreed undertake a cooperative food safety programme that includes traceability⁷. This programme will allow them to share information, ensuring that both countries have the best possible food safety practices. This provides an opportunity for New Zealand to work cooperatively with China to support the possibility of exchanging traceability information between our two jurisdictions.

Recommendation (e): In light of the recent conclusion of an agreement on a cooperative food safety programme between China and New Zealand, MPI should take an early opportunity to engage with China to explore how the exchange of traceability information between the two countries might be progressed.

Dairy product exported from New Zealand, depending on the destination, requires an official assurance from the New Zealand government to the government of the destination country (or region). The destination country may have additional requirements applying to product exported to them. Export certificates are issued on the basis of a verified chain of custody within New Zealand according to specific regulations. This official assurance is usually provided by way of an official electronic certificate issued under the auspices of MPI (through the Animal Products E-cert computer system). The certificate provides official assurance that the product in question is eligible for export to the specified market. Because it is based on a verified chain of custody it also provides proof of provenance and authenticity.

As in New Zealand, there are no current requirements internationally (other than “one up, one down”) for products in the supply chain to be tracked to the ultimate point of sale to the consumer (from a penultimate distribution centre), nor are there any requirements to use global data standards for product identification or data sharing. This is an area that is currently under discussion at a global level by major food manufacturers and retailers through work on the “Next Product Identifier”.

⁷ <http://beehive.govt.nz/release/joint-statement-between-new-zealand-and-people%E2%80%99s-republic-china-establishment-comprehensive->

6. A principles based approach -

6.1 Principles of the food safety regulatory system

MPI has a number of general principles that underlie the food regulatory system. These include:

- establishing frameworks and systems in legislation that can adapt to different situations and industries;
- taking a risk-based and science-based approach to regulation;
- favouring outcome-based regulations, but using prescription where a particular regulatory - requirement is needed; -
- taking a whole-of-food-chain approach to risk management, with risk being managed at those steps in the food chain where it is most effective and efficient to do so;
- making regulation practical and enabling for industry to implement and remove unnecessary barriers; and
- a view that costs should be borne by those who receive the benefit.

6.2 Principles of traceability processes

The Working Group has considered what principles should underpin traceability processes and has agreed on those set out below as providing a sound basis on which to develop a robust system.

Principles that will require a regulatory requirement

1. - The primary purpose of traceability processes is to enable precise tracking of products through the complete product supply chain in order to identify accurately products that may need to be withdrawn from it.
2. - Traceability processes must have and must be seen to have integrity and reliability.
3. - Traceability processes must ensure timely access to traceability data to achieve the desired result as required within the time frames of the regulator.
4. - The focus should be on identifying all Critical Tracking Events (CTEs) and Key Data Elements (KDEs) required for rapid analysis and identification of product moving through the supply chain.
5. - Traceability data should be reported and shared on the basis of a valid request from regulators or trusted partners.
6. - When required, traceability must be shared electronically in a timely manner⁸.
7. - For purposes of reporting, traceability data should be directly usable and intelligible to upstream and downstream partners.
8. - Traceability processes should be outcome-based so that individual enterprises can adopt processes and procedures that make good business sense.

⁸ Electronic data gathering and storage are therefore likely to be the preferred method to be used.

Principles that do not require a regulatory requirement

1. - Best-practice traceability processes may enable other objectives such as generating increased confidence among customers and end-use consumers or supporting claims about the authenticity of products, but these are of a secondary nature.
2. - Traceability processes must be able to be flexible and scalable to be able to handle both complex and simple product supply chains.
3. - Traceability processes must be adaptable in order to accommodate, as far as possible, - additional requirements that might be required in the future. -
4. - Traceability processes should not limit the ability to meet the requirements of all New Zealand's major trading partners. -
5. - Any traceability system employed should use global standards to assist interoperability across all market participants' systems and processes.

Implementation principles

In the course of discussion on a set of fundamental principles on which to base robust traceability processes, a number of principles emerged which were considered to be primarily of an implementation nature rather than fundamental.

1. - Electronic data collection and storage are preferable and represent best-practice.
2. - A transition period may be needed in order to allow industry participants time to invest to make any required changes to operational processes, information systems, and manufacturing technologies.
3. - Smaller businesses may need assistance with regard to implementing new traceability - processes. -
4. - Over time, businesses must adopt global standards that enable easy data exchange.

7. Key elements of traceability processes

Drawing upon key aspects of international requirements, the Working Group has considered existing international requirements and what key data elements should form part of a traceability system.

1. Scope
 - (a) - Dairy products, dairy produce, ingredients and packaging (limited to packaging in contact with food and the final packaging that provides product information - such as ingredients, allergen warning statements - to the consumer).
 - (b) - Feed and other farm inputs are integral for tracking back from the initial milk supply - but are not in scope for this review.

2. - Traceability principles

- (a) - Full chain traceability (where the entire supply chain is visible) will be provided through a one-up, one-down approach supported by interoperable data exchange.
- (b) - Traceability is not dependent on a centralised system.

3. - Traceability elements

- (a) - Record keeping and documentation. To be kept for the greater of either four years or one year past the shelf life of the product.
- (b) - Key data elements: Master data
 - Parties and location information eg name, address, contact information, New Zealand Business Number.
 - Trade item information eg Product ID, name, classification, dimensions, weight.
- (c) - Key data elements: Transactional data
 - Shipment information (despatch advice number, date of despatch/receipt, ship from/to, transporter identification).
 - Logistics unit information eg content description.
 - Batch / lot or serialised trade item information.
- (d) - Critical Tracking Events (CTEs). Key data elements must be recorded when CTEs occur.
- (e) - Human readable labelling information.
- (f) - Machine readable labelling information – while preferable it is not mandatory.

4. - Interoperability

- (a) - All parties in the supply chain must provide traceability data elements in the same globally recognised format (mandatory within New Zealand, recommended overseas).

5. - Traceability and recall

- (a) - Minimum response time specified.
- (b) - Formal preparedness system, including practical traceability exercises.

6. - Verification/Assurance/Corrective

- (a) - Traceability processes implemented by a business must be actively verified by the business and independently, if a traceability event has not taken place in the past 12 months⁹.

⁹ This must include demonstration of accurate trace-back and tracking forward of product to the origin of all inputs and to final disposition or export of all products within the statutory time frame set out in legislation.

8. Proposed regulatory requirements -

8.1 High-level scope

This section uses the principles and key elements to outline the key traceability requirements that should augment existing regulatory provisions. This section does not specify at what level these requirements should be at (eg Act, Regulations or Notices) as this is a wider regulatory design issue. Issues around next steps arising from these proposed requirements are discussed in the next section of this report.

Two important points to note regarding the proposed traceability requirements are:

1. - The proposals as outlined extend to all dairy processing as defined by the Animal Products Act, which includes dairy farms and thus on-farm traceability. The Working Group has recommended that MPI undertake a review of on-farm record-keeping.
2. - Dairy processing can take place under a FSP under the Food Act 1981 if the product is produced only for the New Zealand or Australian markets. Dairy businesses that operate under a FSP still need to meet the proposed traceability requirements and other requirements of the Animal Products Act.

8.2 Detailed proposed requirements

Requirement	Existing or proposed
<p><u>Purpose of the requirements:</u></p> <ul style="list-style-type: none"> • The purpose of these requirements is to establish traceability processes for New Zealand businesses to rapidly identify the location of dairy material, dairy products, ingredients and packaging (limited to packaging in contact with food and the final packaging that provides product information (such as ingredients, allergen warning statements) to the consumer). 	Proposed -
<p><u>Who these requirements apply to:</u></p> <ul style="list-style-type: none"> • These proposed requirements apply to all operators in the dairy sector, including anyone undertaking dairy processing¹⁰, transporting or importing/exporting. • Farms should ensure they have adequate records to enable the tracing back and tracking forward of feed and other farm inputs in a timely fashion. • If dairy processing is being undertaken under an Animal Products Act exemption then these requirements still apply (eg section 8A of the Animal Products Act Exemptions and Inclusions Order allows for dairy processing to take place under a FSP of the Food Act 1981). 	Existing - Proposed - Existing -
<p><u>Traceability systems must be maintained:</u></p> <ul style="list-style-type: none"> • All operators of RMPs (or FSPs if applicable) must provide for a traceability system that: <ul style="list-style-type: none"> ○ Allows for the identification of dairy material, dairy product, ingredients (including processing aids) and packaging added to dairy material or dairy product. 	Existing -

¹⁰ 'Dairy processing' is defined as per section 4 the Animal Products Act 1999 (see Appendix 1).

Requirement	Existing or proposed
<ul style="list-style-type: none"> ○ Enables the movements of dairy material, dairy product, ingredients and packaging to be traced throughout CTEs, in particular: <ul style="list-style-type: none"> ▪ Dairy processing being undertaken under the relevant RMP (or FSPs if applicable), and ▪ From the supplier (backwards) and to the customer (forwards). 	Existing
<ul style="list-style-type: none"> • The key data elements that must be recorded in the traceability system are: <ul style="list-style-type: none"> ○ The supplier of the dairy material, dairy product, ingredients and packaging 	Existing
<ul style="list-style-type: none"> ○ Identification of parties (name and location, New Zealand Business Number¹¹, etc) 	Existing -
<ul style="list-style-type: none"> ○ Product ID 	Existing
<ul style="list-style-type: none"> ○ Lot number/batch number of the dairy material, dairy product, ingredients and packaging 	Mix of both ¹² -
<ul style="list-style-type: none"> ○ Product type of dairy material, dairy product, ingredients and packaging. 	Existing
<ul style="list-style-type: none"> ○ Date 	Existing
<ul style="list-style-type: none"> ○ Location 	Existing
<ul style="list-style-type: none"> ○ Serialisation data if the product is serialised 	Proposed
<ul style="list-style-type: none"> • The data contained in the traceability system must be kept for the greater of either four years or one year past the shelf life of the product. 	Proposed -

Labelling and identification requirements for dairy material or dairy product:

- All dairy material and dairy product must be labelled or identified in accordance with any relevant specifications of the Animal Products Act and the Food Standards Code in a way that is human-readable and matches the information recorded in the traceability system.

Sharing information in traceability systems

- Upon receipt of a lawful trace back request from MPI or an independent verifier (a recognised agency under the Animal Products Act), the key data elements recorded within an operator’s traceability system must be provided to MPI.
- Such information must be provided as quickly as possible and in all cases within 24 hours of a lawful trace-back request, unless MPI or the verifier specifies otherwise¹³.
- Information that is made available must be directly accessible and intelligible, and shared data must be in a standard data format.
- The shared data must be sufficient to allow effective trace-back and tracking forward of dairy products.

¹¹ To be considered once the New Zealand Business Number is fully operationalised.

¹² While lot or batch information is a current requirement for dairy processing companies, it is not a requirement for - retailers. -

¹³ Exceptionally, MPI or the verifier may determine that circumstances are such that more or less time is necessary. -

Requirement	Existing or proposed
<p><u>Verification and recall requirements:</u></p> <ul style="list-style-type: none"> • All RMPs (or FSPs if applicable) must contain systems to undertake: <ul style="list-style-type: none"> ○ Recalls of dairy material, dairy product, ingredients or packaging; and ○ Practical tests of traceability processes to supply the information required for mock recall and these to be independently verified or audited where a product recall has not taken place in the past 12 months¹⁴. 	<p>Existing -</p> <p>Proposed -</p>

8.3 Provision of review

The enhanced traceability processes recommended in this report should be reviewed within three years of implementation to assess whether the current outcome-based approach has proved effective or whether an increased degree of prescription may be required to ensure that both industry-specific and wider “Brand New Zealand” objectives are being achieved. This review should occur earlier if a significant traceability negatively affects Brand New Zealand.

The best-practice guide should also be reviewed within three years of implementation. The Working Group recommends that this guide be promoted through a strategic partnership with an industry group such as DCANZ.

9. Next steps for New Zealand traceability processes

9.1 Implementing the proposed traceability requirements

The proposed traceability requirements in this report are being provided to the Director-General of MPI to consider whether they are to be implemented. MPI has advised the Working Group that the proposed traceability requirements will go into a wider policy process that involves standard consultation processes.

The Working Group understands that this wider policy process will determine whether its recommendations are pursued or amended, and if the decision is made to proceed, how they are implemented. Implementation issues that MPI will need to consider include ensuring that legislative compliance is extended to cover any new traceability provisions that may be introduced. This is an issue that is not in scope for the Working Group.

MPI’s policy process will also involve a cost/benefit analysis. While implementing the proposed regulatory requirements will impose costs to industry, significant benefits from enhanced traceability processes will accrue to both individual businesses (eg through consumers having greater confidence in their brand) and the wider New Zealand public (eg through more rapid quarantining of product that is unsafe or not fit-for-purpose when required and an enhancement of Brand New Zealand’s reputation).

The proposed regulatory requirements establish practical tests of the traceability processes that an operator of an RMP must complete. These tests are envisaged to be limited to within that operator’s control (ie ‘one up, one down’). A broader supply chain test should be undertaken periodically by MPI to ensure effective interoperability.

Recommendation (f): MPI should undertake periodic tests of interoperability of traceability information across the supply chain.

¹⁴ For example, to locate product and trace history of a product within the stipulated time period.

This report is focused on traceability processes and does not extend into other topics such as product recalls. Nevertheless, given the changes proposed in this report, it is recommended that MPI review any of its guidance material that makes mention of traceability.

Recommendation (g): MPI to review any of its guidance material that makes mention of traceability (eg on recalls¹⁵) in light of this report.

In progressing towards implementing the Food Safety Modernization Act, the United States has demonstrated the value of undertaking pilots of proposed traceability processes. The Working Group proposes that a similar process be undertaken in New Zealand in the process of implementing new regulatory requirements and introducing the proposed best-practice guide. This will require a partnership between MPI and the dairy industry, and the lessons learnt should be made publically available.

Recommendation (h): MPI and industry should work in partnership to implement pilots of the proposed regulatory requirements and best-practice guide.

International best-practice in traceability continues to evolve and it is important that New Zealand keeps fully abreast with developments in this area to ensure that it continues to be a global leader. Given the increasing importance of traceability in food safety assurance, both MPI and the dairy industry should monitor international developments and best-practice in traceability and share such information as appropriate.

Recommendation (i): MPI and the dairy industry should monitor international developments and best-practice in traceability and share information as appropriate.

9.2 Influencing the international traceability requirements

While the principle of full supply chain traceability is a clear “gold standard” to which New Zealand must aim to aspire, there are very real challenges to implementing the principle in practice. In New Zealand itself, some gaps remain in the full supply chain, such as that between, for example, distribution centre and individual retail outlet. Given the investment in legacy information systems, it will take time to close all these gaps.

The way ahead is also not entirely clear for product that is exported offshore. A number of New Zealand’s key markets have very specific traceability requirements, while others are moving in that direction. Where such requirements exist, the immediate challenges are those of interoperability and access to relevant data in a timely manner. The use of global standards is a key to progress in interoperability.

In those markets that have not yet introduced appropriate traceability requirements, New Zealand’s ability to exercise full supply chain traceability is significantly compromised. The potential reputational risks for “Brand New Zealand” are obvious. This suggests that it would be very much in New Zealand’s interests for there to be universal global acceptance that full-chain traceability using global data standards should be a mandatory element underpinning international trade in food and food products. Clearly, this cannot be achieved “overnight” or by New Zealand alone, but New Zealand should build on its current work in the APEC Committee for Trade and Investment and work actively in all relevant plurilateral and multilateral forums to promote the introduction of appropriate measures internationally.

¹⁵ <http://www.foodsafety.govt.nz/elibrary/industry/recall-guidance-material-template/recallguidancematerialfinal.pdf>

New Zealand leadership promoting greater interoperability of global data standards has a number of benefits. It will:

- demonstrate New Zealand’s commitment to the most robust traceability system achievable;
- provide a platform for the introduction and adoption of agreed global standards; and
- ensure that New Zealand interests will be fully taken into account as next generation requirements evolve.

Recommendation (j): The Working Group proposes that New Zealand government agencies and industry should develop and implement a strategic action plan to encourage, within APEC and other international forums, the introduction of agreed global standards and interoperable traceability processes in all aspects of international trade in food and food products.

Pending moves towards international mandatory full-chain traceability, a useful transitional step would be for all New Zealand dairy exporters to ensure that provision for tracking and tracing product is included in their contracts with offshore partners and logistics providers. In markets which require at least a “one up, one down” approach, this will effectively establish an information interface supporting traceability beyond New Zealand’s borders. The Working Group accordingly recommends that such provisions be included to the maximum extent possible in future contracts.

Recommendation (k): That MPI and the dairy industry should encourage dairy exporters to endeavour to include a requirement in their contracts with their offshore partners (including customers and logistics providers) that they operate as a minimum a ‘one up, one down’ traceability process.

9.3 Pursuing technological opportunities

Today’s technology already allows data collection and dissemination in ways unthought of only a few years ago. New and emerging technologies are likely to prove enablers of new approaches to traceability unforeseen at this stage, which are easily accessible and highly cost effective. In this context, the New Zealand Data Futures Forum in its 2014 report recommends that New Zealand should create a competitive advantage by developing “a high value, strongly inclusive, high trust and control data sharing eco-system”¹⁶. The report singles out the primary sector in general, and traceability in particular, as an area of high potential for the development of such an eco-system.

Most participants in dairy supply chains already routinely collect and store large quantities of data, including elements that support traceability processes. Such data elements support traceability and other demands for greater transparency and real-time access to supply chain information by regulators, customers and final consumers. Increasingly, such data will be collected and stored once and once only, but accessed and used for a variety of purposes by a number of trusted and authorised users. This will require the development of interoperable systems based on standardised global formats.

Greater batch visibility throughout the supply chain offers a global opportunity, in which respect New Zealand retailers and distributors are no different than the rest of the world. At the global level manufacturers and retailers are working on what is called the “Next Product Identifier”, a product bar code that will carry more data than the current bar code and include batch level data. However, to leverage this

¹⁶ https://www.nzdatafutures.org.nz/sites/default/files/NZDFF_Key_recommendations.pdf

technology will require significant IT and systems investment to perpetual inventory management systems, point-of-sale systems and hardware in order to read these codes and store the quantum increase in data. It is forecast that the fast movers will be adopting these changes in Europe / United States in the next five years, and in Australia / New Zealand thereafter.

In an electronically-connected globalised world there is no reason why interoperable systems need be limited to particular physical boundaries. In other words, they potentially offer the means by which traceability might be implemented along complete supply chains, irrespective of national boundaries and jurisdictions. In this context, the Working Group is aware of Electronic Product Code Information Services (EPCIS) about which an APEC report¹⁷ asserts that “there is no need to develop a new architecture for sharing...information, as full advantage can be taken of the existing EPCIS standard ... which presently appears to be the only standard based on open specifications”. The potential of the EPCIS processes was illustrated by the successful GS1 New Zealand/ANZCO Foods proof of concept of tracking meat from farm to retailer¹⁸.

EPCIS is being promoted by a number of governments and international organisations, including the European Union in the seafood sector and by the United States as a distributed approach (ie one in which data is not held centrally, but rather in individual supply-chain participants’ databases on separate servers) that can reliably and efficiently share information among those participants, as well with competent authorities. In effect, EPCIS creates an “internet” of users.

EPCIS is not yet fully fit-for-purpose as an international tool to enable seamless end-to-end traceability. Accordingly, the Working Group does not recommend any immediate move towards adopting EPCIS as an international traceability tool. However, it believes that New Zealand should monitor closely the further development of EPCIS and other interconnected approaches based on distributed data stores, with a view to considering their appropriateness for traceability in the future.

Recommendation (l): MPI and the dairy industry to monitor closely the development of interconnected traceability processes based on distributed data sources.

Given the needs of the regulator it is important that its information systems have the ability to receive and process traceability information. MPI has been responsible for establishing many databases that contain information that is relevant to traceability (eg the National Animal Identification and Tracing system). Accordingly MPI should consider traceability in future upgrades or replacements of its information systems.

Recommendation (m): MPI should ensure that traceability (and, to the extent possible, global interoperability of traceability information) is taken into account when implementing new information systems.

¹⁷ APEC Document APEC#212-CT-03.1, produced by the Ministry of Economy, Trade and Industry, Japan, Tokyo, July 2012.

¹⁸ http://www.gs1nz.org/files/2313/7947/8796/Livestock_Traceability.pdf

10. Conclusion -

The Inquiry's December 2013 report considered that "New Zealand's traceability systems for dairy foods.....can and should be improved". The challenge for this Working Group in the first part of its work has been to determine not just how traceability may be improved, but to ensure that the way forward is practical, cost-effective and future-looking. The challenge is heightened by the fact that not only is the practical functioning of the system important, but it is also critical how it is perceived by trading partner regulators, customers and downstream consumers. Such perceptions are important contributors to the overall perception of "New Zealand Inc" or "Brand New Zealand" and, as such, have implications beyond the dairy industry alone.

The Working Group is aware that customer and consumer expectations are likely to become more demanding in the future. Overseas regulators, partially in response to this and partially in response to other drivers, may become more prescriptive in what they require from producers. While New Zealand has wisely by and large followed an approach of requiring prescribed outcomes, rather than a more detailed regulatory approach, it cannot be assumed that this will continue to be widely accepted in the future.

This is not to suggest that the current approach should be abandoned, but rather that the industry needs to take into account the likelihood that ever more information will be required by regulators and consumers. In turn, this suggests that the industry may wish to find ways of converging on agreed best-practice approaches, particularly in areas such as data recording and data sharing. The Working Group is also of the view that advances in technology will have a significant impact on what that best-practice will come to be.

The Inquiry noted that the preponderance of submissions it received was in support of instituting improvements to the current New Zealand traceability system. Five key points emerged:

- An export-dominated country like New Zealand should be at the forefront of traceability using best-practice international standards;
- All traceability provisions should be in one piece of regulation;
- The level of prescription for traceability should be increased, especially for consumer-sensitive or high-risk products;
- The linking ability (ie interoperability) of different company systems should be improved; and
- There should be more testing of traceability processes.

The Working Group endorses these points, with the partial exception that the level of prescription required should be limited to that which is cost-effective, practical, and directly applicable to strengthening New Zealand's ability to rapidly locate food in the supply chain and recall or withdraw it if unsafe.

Against this background, the Working Group has proposed a number of new regulatory requirements that respond to these points from the Inquiry and that it believes will strengthen New Zealand traceability processes. If these proposals are implemented alongside a positive food safety culture in every segment of industry, substantial benefits will accrue to both the dairy sector and New Zealand as a whole.

11. Appendices -

Appendix 1: List of Dairy Traceability Working Group members

John Larkindale: Independent Chair, nominated by the Director-General of MPI. John is a retired diplomat, - former Deputy Secretary at the Ministry for Foreign Affairs and Trade (MFAT), and a former New Zealand - High Commissioner to Australia. He has an academic background in mathematics and chemistry. He has a - PhD degree and has held a number of senior MFAT postings overseas, including the UK and China. -

Carol Barnao: Deputy Director-General Change Management Programmes, Ministry for Primary Industries. - Nominated by the Director-General of MPI. Carol is a former Deputy-Director General of MPI's Standards - Branch. Prior to that she held several Standards Branch positions in the Ministry of Agriculture and - Forestry, and later the New Zealand Food Safety Authority. Prior to joining MPI, she was involved for 18 - years with the dairy industry. -

Jerry Castellanos: Global Lead for Traceability, Fonterra. Nominated by DCANZ . Jerry is responsible for - delivering the review and overhaul of traceability systems across all Fonterra business units. He has held - many leadership roles relating to information systems and technology. He previously held the lead architect - role of a major multi-year supply chain transformation programme in New Zealand Milk Products. -

Craig Cooper: National Compliance Manager, Open Country Dairy (OCD). Nominated by DCANZ. - Craig manages the AP-ECERT transition at OCD, a key component of which is to maintain traceability of - products and ingredients to demonstrate eligibility. Craig has previously worked at Fonterra Brands, - Goodman Fielder Baking/Dairy and recently for infant formula exporter New Image Group. -

Stephen (Steve) Darling: Managing Director, Avante International Limited. Nominated by New Zealand - Infant Formula Exporters Association. Avante develops and distributes a range of premium nutritional and - supplementary products for families and exports three proprietary brands of infant formula. -

Richard Manaton: General Manager Strategy and Corporate Affairs, Progressive Enterprises Ltd. - Nominated by New Zealand Retailers Association. Richard has held marketing, compliance, food safety, - strategic planning, government relations, and corporate communications roles at senior leadership level. - He has previously held senior marketing positions at Fonterra, the last as Global Category Director. -

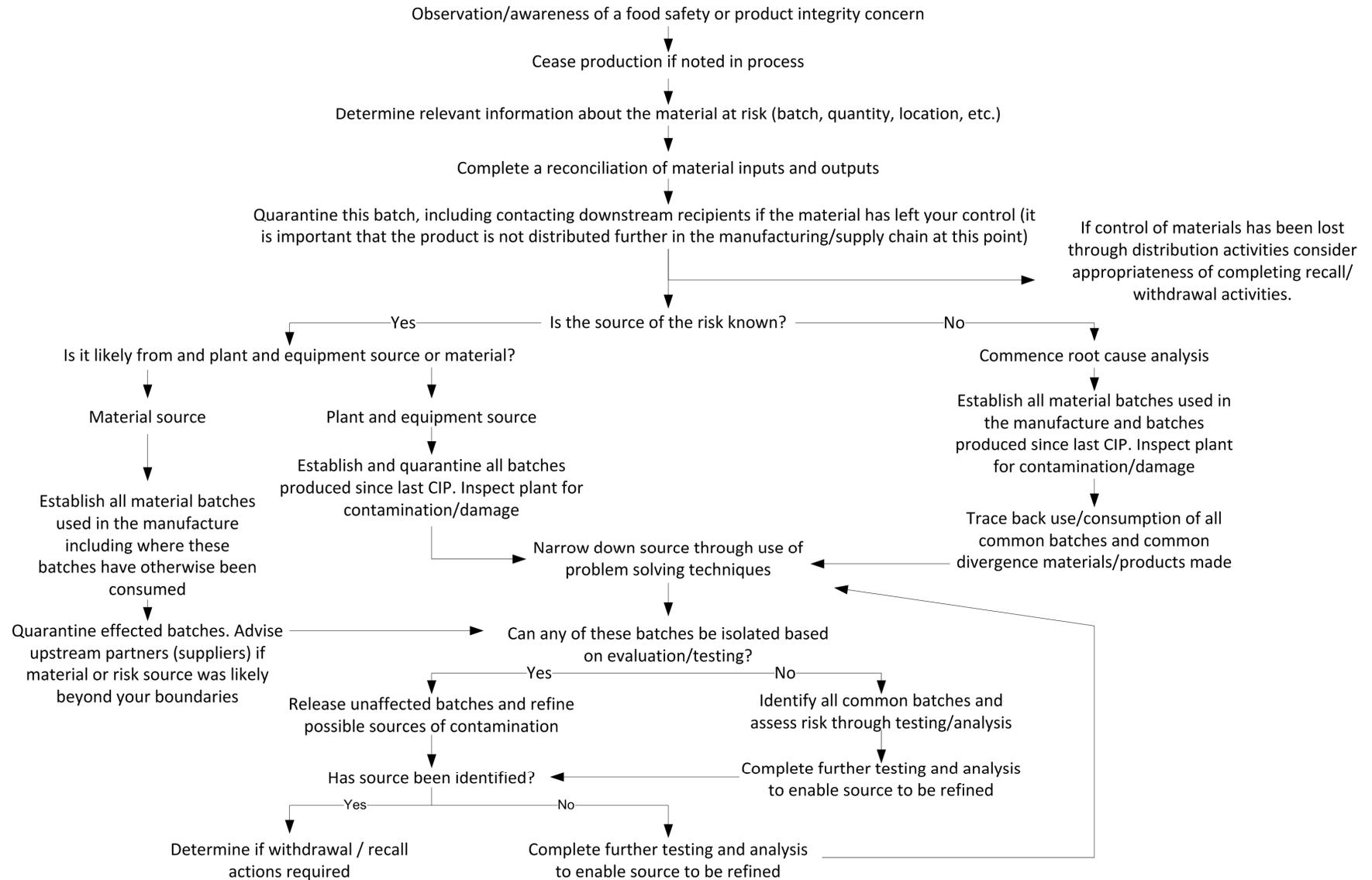
Matthew Stanish: General Manager Manufacturing and Supply Chain, New Image Group. Nominated by - Infant Nutrition Council. New Image Group is a manufacturer and marketer of a wide range of nutritional - products including infant, aged care, and general nutrition offerings. -

Michael Stein: General Manager, Quality & Technical Services, Synlait. Nominated by Food and Grocery - Council. Synlait has recently commissioned an infant formula and nutritional products manufacturing - facility in South Canterbury. -

Peter Stevens: Chief Executive, GS1 New Zealand. Invited by the Director-General of MPI. GS1 provides the - standards and services for identification, automatic data capture and Radio Frequency Identification and - systems for traceability used by many companies across multiple sectors in New Zealand and globally. -

Carl Trask: Operations Manager, Dairy, Audit and Inspection, AsureQuality. Invited by the Director-General - of MPI. Carl manages the Dairy Risk Management Programme verifiers and engineers. -

Appendix 2: Product recall flow chart -



Appendix 3: Excerpts of regulations relating to dairy traceability

Animal Products Act 1999

4 Interpretation -

dairy processing means all processing activities in relation to dairy material; and includes— -

- (a) the extraction of milk from milking animals for the purposes of export or sale:
- (b) transport of dairy material from a farm dairy to a place where processing or manufacturing involving the dairy material occurs:
- (c) processing of dairy material, including heat treatment, cooling, separation, concentration, filtering, blending, and extraction of milk components:
- (d) the addition of other material (including food, ingredients, additives, or processing aids as defined in the Food Standards Code) or other dairy material to dairy material:
- (e) the manufacture of products, including milk, butter, cream, milk-fat products, cheese, processed cheese, whey cheese, dried milks, milk-based infant formula, evaporated milks, condensed milks, whey, whey powder, whey products, casein, milk protein products, ice cream, low dairy fat ice cream-like products, yoghurt, other fermented milks, dairy desserts, lactose, and colostrum products:
- (f) the packaging of dairy material:
- (g) the storage, transportation, and handling of dairy material prior to—
 - (i) delivery of the material at the place of sale for consumption or for end use for purposes other than consumption; or
 - (ii) its export:
- (h) further processing of dairy material that was previously dairy product with or without the addition of other material (including food, ingredients, additives, or processing aids as defined in the Food Standards Code), including reprocessing, repacking, reconstitution with water, and recombination of dairy products with or without water to make any dairy products

17 Contents of and requirements for risk management programmes

(2) A risk management programme must—

- (c) provide for appropriate corrective actions (including recall of product) to be undertaken where the product may not be fit for intended purpose or not in accordance with its labelling or identification:
- (d) set out appropriate and auditable documentation and record keeping:
- (e) as appropriate to the operations under the risk management programme, contain the matters specified in, and otherwise comply with—
 - (i) any relevant animal product standard or other requirement prescribed by regulations made under this Act:
 - (ii) any relevant specifications set by the Director-General under section 167 (including location of reference material and documents recording specific procedures).

(3) In relation to hazards (and without limiting the requirements of subsection (2)), a risk management programme must demonstrate that the following matters have also been taken into account in its development:

(g) appropriate and auditable documentation and record keeping.

44 Regulations may prescribe animal product standards

(1) Regulations may be made under section 166, on the recommendation of the Minister, prescribing standards that specify the criteria that must be met to ensure that animal products produced or processed for reward or trade or for export from New Zealand are fit for intended purpose.

(2) Without limiting the generality of subsection (1), standards may be prescribed for the purposes of, or in relation to, all or any of the following matters:

(j) the identification and labelling of animal material or products or associated things:

(k) the keeping of records and provision of returns and information:

(l) other matters relevant to the management of risk factors.

166 Regulations

(1) The Governor-General may from time to time, by Order in Council, make regulations for all or any of the following purposes:

(a) prescribing requirements, criteria, specifications, procedures, and related matters in relation to risk management programmes and the amending and updating of risk management programmes, and to elections to operate under a risk management programme under section 32 or the registration of a food safety programme as a risk management programme under section 34:

167 Notices

(1) The Director-General may from time to time issue notices for the following purposes:

(b) setting specifications in relation to risk management programmes for the purposes of sections 17 and 34:

Animal Products (Dairy) Regulations 2005

Standards relating to identification, labelling, and record keeping

17 Identification system requirements

(1) All operators of risk management programmes, all exporters, and all other categories of person required by specifications to do so, must have a tracking system that—

(a) allows for the identification of dairy material, dairy product, and ingredients added to dairy material or dairy product; and

(b) enables the movement of the dairy material, dairy product, or ingredients to be traced throughout the dairy processing, either forwards or backwards.

(2) The Director-General may, by specifications, require persons other than dairy processors and exporters to maintain a tracking system.

18 Labelling and identification requirements -

(1) Dairy material and dairy product must be labelled or identified in accordance with any relevant specifications.

(2) Any labelling or identification required by specifications must—

- (a) clearly relate to the dairy material or dairy product to which it applies; and
- (b) contain information that accurately describes or differentiates the dairy material or dairy product to which it applies; and
- (c) declare the manufacturing method used for the dairy product to which it applies.

(3) The Director-General may, by specifications, require dairy processors or other categories of person to label or identify dairy material or dairy product in accordance with the specifications.

21 Director-General to have regard to certain circumstances when making specifications

Before making specifications for the purposes of these regulations, the Director-General must be satisfied that at least 1 of the following factors applies in relation to the proposed specifications:

- (a) it is not reasonable or practicable for the relevant risks to be managed in some other way;
- (b) the specifications are reasonable on the grounds of economic efficiency;
- (c) the specifications are necessary to meet export requirements.

Animal Products (Export Requirements – Dairy Products) Notice 2005

14 Information to enable traceability

Sufficient information is to be provided on a label affixed to the outer packaging of any dairy material or product intended for export to ensure traceability. This includes:

- (a) A unique identifier or the name and address of the final premises of manufacture; and either
- (b) Lot identification, such as a bag number, box number or quality unit number of the product; or
- (c) The date of manufacture or the date of packaging in code or in plain text.

Animal Products (Dairy Processing Specifications) Notice 2011

24 Records of suppliers and traceability -

The risk management programme must ensure a record is kept that identifies— -

- (a) the name (if any) or unique location of every farm dairy from which raw milk is supplied for the manufacture of dairy products;
- (b) the name and either location or address of each farm dairy operator;
- (c) the name and either location or address of each farm dairy owner, if the operator is not the owner;
- (d) the location of each farm dairy;
- (e) the amounts of milk received on each day from each farm dairy; and
- (f) sufficient detail to allow the identification of dairy products containing or made from milk from each farm dairy.

Animal Products (Official Assurances Specifications – Dairy Material and Dairy Products) Notice 2014

2.1.2 Requirements to keep records

- (1) Dairy operators intending to process dairy material or dairy product for export with an official assurance, must-
- (a) keep records so that the usage and movement of the dairy material or dairy product, and any dairy ingredients and processing aids used, can be traced; and
 - (b) keep eligibility documentation for the relevant dairy material or dairy product; and
 - (c) keep test reports obtained during the production and processing of the dairy material or dairy product.
- (2) The dairy operator who processed the final product must, if required by the Director-General, an authorised person, the relevant exporter or an official assurance verifier, provide the records required to be kept under this clause.
- (3) Dairy operators must-
- (a) ensure that the system or systems used to generate or hold records have sufficient security built in to restrict the person who can change or affirm the status of any dairy material or dairy product; and
 - (b) ensure that all changes and affirmations leave an auditable record, including identification of persons who submit the information into the system.
- (4) Dairy operators to whom Part 4 of this notice applies must retain a copy of received and sent eligibility declarations and eligibility documents accompanying incoming consignments.
- (5) Dairy operators must keep records required by this clause for a period of 4 years after the last of the dairy material or dairy product that the records relate to have left the control of that premises.

2.1.3 Requirement to incorporate into Risk Management Programme a description of how the requirements of this part will be met

A dairy operator intending to process dairy material or dairy product for export with an official assurance, must include in its Risk Management Programme a description of how the requirements of this part will be met.

Note: see also Part 4 of this notice for E-cert traceability requirements for specified markets.

DPC 1: Animal Products (Dairy): Approved Criteria for General Dairy Processing

DPC 2: Animal Products (Dairy): Approved Criteria for Farm Dairies

DPC 3: Animal Products (Dairy): Approved Criteria for the Manufacturing of Dairy Material and Product

DPC 4: Animal Products (Dairy): Approved Criteria for Storage and Transportation of Dairy Material and Products

Food Standards Australia New Zealand, Food Standards Code 1.2.2, Food Identification Requirements

1 Name of food

(1) The label on a package of food must include –

(a) the prescribed name of the food, where the name of a food is declared in this Code to be a prescribed name; and

(b) in any other case, a name or a description of the food sufficient to indicate the true nature of the food.

(2) Where a food is not required to bear a label pursuant to clause 2 of Standard 1.2.1 –

(a) the prescribed name of the food, where the name of a food is declared in this Code to be a prescribed name; and

(b) in any other case, a name or a description of the food sufficient to indicate the true nature of the food; must be –

(c) displayed on or in connection with the display of the food; or

(d) provided to the purchaser upon request.

(3) For the purposes of paragraphs (1)(b) and 2(b), the definitions of certain foods as set out in Chapter 2 of this Code, do not of themselves establish the name of the food.

2 Lot identification -

The label on a package of food must include its lot identification, unless the food is – -

(a) an individual portion of ice cream or ice confection; or

(b) in small packages, and the bulk packages and the bulk container in which the food is stored or displayed for sale includes lot identification.

3 Name and address of supplier

(1) The label on a package of food must include the name and business address in Australia or New Zealand, of the supplier of the food.

(2) A vending machine from which food is sold must clearly display in a prominent place on, or in the vending machine, the name and business address in Australia or New Zealand, of the supplier of the food.

(3) The label on a hamper must include the name and business address in Australia or New Zealand, of the supplier of the food.