INTRODUCTION

Food Safety & Traceability are increasingly reaching ‘top of mind’ positions for consumers and regulators alike. Food not only needs to be safe but in order to verify that it is safe and to be able to respond to situations where Food Safety has potentially been compromised, traceability is required. The terms ‘Food Safety’ and ‘Traceability’ represent one and the same challenge when it comes to managing the relationship with the consumer along the entire value chain, from the reality as well as the perception point of view.

Government is working towards full implementation of the new Food Act in 2016, which will have consequences for our industry. Food Safety concerns can arise overnight and from unexpected directions. The 2014 Yersinia outbreak is a case in point. It is therefore right and necessary for the produce industry to develop competencies in the Food Safety & Traceability area beyond those that exist already, with the objectives of protecting the consumer, taking responsibility as an industry for Food Safety & Traceability management in the produce supply chain and engaging with Government on ensuring that legislation and regulation applied to the produce industry is meaningful, relevant, practical and achievable.

Part of taking responsibility as an industry has to be working together as an industry. The purpose of this paper is to outline why such an approach is essential, to introduce a proposed Food Safety & Traceability Framework and to achieve sign off by the United Fresh Executive Committee and the Horticulture New Zealand Board for the introduction of the proposed framework.

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2 Matthew Dolan is Business Manager, Horticulture New Zealand, responsible for the Food Safety and Environment (agrichemicals) portfolio. He manages two businesses in this portfolio, New Zealand GAP and the New Zealand Agichemicals Education Trust. Matthew is a member of the Technical Committee advising the board of the Sydney based Fresh Produce Safety Centre Australia & New Zealand.

3 Anne-Marie Arts is the United Fresh Food Safety representative; a member of the International Society of Horticultural Science; a member of Zespri’s Market Access and Food Safety Steering Group; a member of the European Union-funded IACT Technical Committee advising the Secretariat of the South Pacific Community in Suva on increasing agricultural commodity trade; and Executive Director, The AgriChain Centre.
THE APPROACH

Food Safety & Traceability initiatives are no longer optional extras but have rapidly become the norm and expectation as well as the ticket to the ball. In other words, no food related business can operate these days without having appropriate Food Safety & Traceability structures in place.

The produce industry is no exception. Just what is ‘appropriate’ is part of the detail that can vary from food sector to food sector and between businesses within the same food supply chains.

In the absence of clarity, direction, resolve and accountability, multitudes of uncoordinated systems and/systems components emerge which is unhelpful, confusing, inefficient and costly.

There are several on-farm and whole of value chain industry standards in use in New Zealand. These are being applied to both local and export produce. New Zealand produce is an export industry in growth mode. One of our two main stream supermarket brands is Australian owned. The major wholesalers have subsidiary operations in the Australian market and elsewhere. Zespri is a global brand with global reach. It can therefore be expected that New Zealand producers and marketers need to not only operate to local regulatory standards and private schemes requirements but also to several off-shore ones. The global nature of the produce industry is responsible for the fact that in addition to Horticulture New Zealand as the national grower body and United Fresh as the whole of value chain pan industry, PMA Australia – New Zealand has also established itself as a representative regional body.

Growing A New Future, the Horticulture Industry Strategy 2009-2020, emphasises “the need for us to grow a different future.” The Strategy’s defining statement is that “industry participants will achieve scale or proxies for scale through structures that enable the growth required.” With one or two notable exceptions (Zespri & ENZA being two of them), developing proxies for scale is a more realistic undertaking than the pursuit of scale itself.

The increased focus on Food Safety & Traceability that our industry is experiencing internationally presents an opportunity to apply our combined industry expertise to creating sustainable competitive advantage for New Zealand produce in the global trade environment. This involves aligning our domestic industry standards with those experienced by our exporters offshore, adopting a co-ordinated pan industry approach on Food Safety & Traceability and being proactive in achieving the right balance between safeguarding our national industry interests and cooperating in our industry’s best interest with Australasian, Pacific Rim and Global structures and interest groups.

International standards and systems not only exist for product or processes along the value chain (BRC, Global Gap) but also for the structure of the information flow that accompanies product. The global industry norm accepted by the FMCG industry and retail chains world-wide is the GS1 barcode standard. The grocery industry could not exist without it. In recent years, the GS1 Global Office has worked with the International Federation for Produce Standards to develop Guidelines for the use of GS1 Global Location Numbers (GLN) and Global Trade Item Numbers (GTIN) in the fresh produce value chain. The local New Zealand produce industry has currently only a minimum degree of exposure to these standards, yet they represent a potentially national data management framework
that can assist us in establishing a robust Food Safety & Traceability structure for the fresh produce industry.

We consider sustainable Foresight based Food Safety & Traceability excellence as a desirable proxy for scale within the intent of the Horticulture Industry Strategy. The Foresight based approach recommended picks up on a recently published paper by Zespri Innovation Leader Alistair Mowat.

Mowat (2014) researched the environmental impact of kiwifruit exports⁴. His paper contained a structural model aimed at illustrating how tactical, operational, strategic and Foresight considerations do not exist in isolation from each other but are connected.

In his model Mowat not only illustrates how the relationship between tactical operational and strategic considerations is structured, but positions the Foresight Quadrant as an integrated element of an organisation’s business matrix.

The fresh produce industry landscape is changing. Globalisation, legislation changes, increased retailer awareness and expectation, consumer concerns, electronic media capabilities, technical advances and occurrence of produce related Food Safety scares all combine to create considerable down draft for the fresh produce value chain. In order to be effective and efficient, industry needs to clearly understand where direct intervention is required, when existing global standards and systems can be adopted and endorsed, under which circumstances a joint approach with Australia needs to be considered and how to move from the discussion into the action and implementation phase of any new Food Safety & Traceability initiative.

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This is something the industry needs to manage proactively, as illustrated in Figure 2, the content populated version of Mowat’s model. The content represents the proposed initial Food Safety & Traceability work programme of United Fresh and Horticulture New Zealand.

The events surrounding the 2014 Yersinia scare have clearly demonstrated how fast media can react, how limited affected consumers are in their ability to accurately recall events, how fast ill informed comments get misrepresented as fact, how little coordination exists between the various government agencies involved, how one should not assume that good science is always used to reach factual conclusions and how vulnerable the entire produce industry is to all of the above.

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<tr>
<th>TACTICAL</th>
<th>FORESIGHT</th>
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<tr>
<td>• Cooperate with the Australian Fresh Care programme, the Produce Safety Centre and PMA Aus-Z, taking an ‘overarching principles’ and ‘as needed’ approach</td>
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<td>• Position NZ GAP to meet all national retailers’ Food Safety &amp; Traceability needs</td>
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<td>• Adopt a NZ Food Safety &amp; Traceability Framework</td>
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<td>• Moving from NZ GAP checklists to aspirational on/off-farm systems accountability</td>
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<td>• Aim at becoming a Food Safety Culture conscious industry</td>
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<th>OPERATIONAL</th>
<th>STRATEGIC</th>
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<td>• Write submissions to MPI on Draft Food Safety Regulations &amp; proactively manage the MPI relationship</td>
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<td>• Establish Industry Food Safety Committee</td>
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<td>• Endorse GS1 GTIN &amp; GLN Standards</td>
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<tr>
<td>• Develop NZ GAP ‘bolt on’ modules for Food Safety, Sustainable Farming &amp; selected off-farm processes</td>
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<td>• Recognise NZ GAP Food Safety &amp; Traceability ‘bolt on’ as industry norm</td>
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**Organizational Networks**
- **External**
- **Internal**

**Timeframe**
- **Short**
- **Long**

Food Safety Culture consciousness does not happen by osmosis or overnight. Getting there requires hard work and is a journey rather than an event. We have identified eight factors that contribute towards attaining Food Safety Culture Consciousness. These are:

- Standards
- Verification
- Training & Competence
- Systems
- Research & Science
- Execution (Politics, Culture, Operations)
- Government & Legislation
- Industry Leadership

Figure 2
None of these factors exist in isolation from each other and they are all required to work and be in harmony in order for a Food Safety Culture to truly exist. In order to achieve this state, the fresh produce industry needs to adopt a Food Safety & Traceability framework, proactively and in a consistent and committed manner, to work towards achieving its key objectives.

THE FRAMEWORK

The NZ industry would benefit from a Food Safety & Traceability (FS & T) Framework that can engender confidence from regulatory and private programmes both nationally and internationally. The benefit of having an industry framework is that all necessary debate and discussion can be directed, focused and kept on track.

Food Safety and Traceability Data does not exist in isolation but becomes part of the Chain Information Flow. This means that the entire fresh produce value chain would benefit from a more structured approach aimed at attaining a sustainable and robust Food Safety Culture.

**Produce Industry Food Safety & Traceability Framework**

- **Ministry for Primary Industries and Ministry of Health Objective:**
  - To maximise the recognition of wider good industry programmes through increased confidence in the industry framework.

- **NZ Industry Bodies Objective:**
  - To provide foresight, guidance and leadership on all food safety issues to its members and for the industry as a whole.

- **Retailer Business Schemes Objective:**
  - To have New Zealand retailers operating within the New Zealand industry FS & T Framework and to actively engage and take initiative.
  - To encourage and promote integrated Food Safety practices throughout the supply chain.
  - To have offshore retailers afford equivalency with their schemes.

- **Training & Competence Objective:**
  - To establish fruit & vegetable focussed Food Safety training along the supply chain, including on-farm based, post harvest, retail, based on accessible and affordable e-learning methods.

- **Standards Objective:**
  - Generally agreed objectives are underpinned by appropriate standards. Objectives should be ‘whole of chain’ oriented.

- **Systems Objective:**
  - To define the elements and commonality of effective Food Safety systems and enhance effectiveness, integrity, rigour and progress improvement.

- **Verification Objective:**
  - To increase the integrity and robustness of industry owned independent verification and to maximise recognition by regulators and private schemes.

- **PMA ANZ Objective:**
  - To integrate PMA ANZ activity within the New Zealand FS & T framework as appropriate.

- **Private Business Schemes Objective:**
  - To base their work on the New Zealand FS & T Framework.

- **Research Bodies Objective:**
  - To explore opportunities and synergies and to ensure that produce related research is not only conducted but done so in a coordinated fashion.

![Figure 3](image-url)
CONCLUSIONS & RECOMMENDATIONS

The need for Food Safety & Traceability Best Practice will not disappear into the sunset in 2015 and beyond but constitutes a formidable challenge in both the substantive and perception arenas. This represents an opportunity as well as a threat to the entire fresh produce value chain.

The threat is very simple. Unsafe food, real or perceived, does not get eaten. If that happens, all our businesses suffer.

The opportunity is to establish a Food Safety Culture that engenders consumer, regulator and private scheme owner confidence. There is a real possibility that an effective and robust Food Culture may act in the domestic market as a raised barrier to entry, thus contributing to more stable volumes and values and in the export market as a Proxy for Scale, differentiating our offer from the produce sold by developing economies with labour cost and actual scale advantages.

Export customers do look at our domestic market to check whether ‘we do as we say, and discernible differences in standards will not only be noted but create the wrong impression. This point was also made by MPI during the United Fresh Food Safety workshop in November 2014.

It is therefore recommended that

- United Fresh and Horticulture New Zealand work together towards achieving a positive and progressive Food Safety culture in the fresh produce value chain
- GS1 GTIN, GLN and Databar Standards are endorsed for the local market.
- The Produce Industry Food Safety & Traceability Framework is adopted as a starting point for 2015 and referred to the United Fresh Food Safety committee for further work and implementation.
- The NZ Gap Committee is asked to develop the NZ GAP programme into a Foresight based “NZ GAP Plus” device, covering on- and appropriate off-farm processes, including Food Safety & Traceability, suitable for United Fresh endorsement within the Food Safety & Traceability Framework.
- The Food Safety Committee engages with MPI and other relevant agencies on behalf of the entire produce industry on all Food Safety & Traceability related matters.

MPI have released their Discussion Paper on “Proposals for regulations under the Food Act 2014”, with submissions due on 31 March 2015. We are working on the United Fresh submission. This paper has not addressed hypothetical considerations but the reality we live in.