

The Fresh Produce Safety & Traceability Challenge

Current Reality, Emerging Trends and the Road Ahead

Presented by Richard Bennett, PMA-ANZ

and

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Richard Bennett

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Richard is the Australian Director of the International Federation for Produce Standards (IFPS) and chairs the IFPS Food Safety Committee.



**FRESH PRODUCE
SAFETY CENTRE**

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Dr. Hans Maurer

Dr. Hans Maurer is a member of the United Fresh Executive Committee, a Trustee of the 5+ a Day Charitable Trust, and acts as the Knowledge Officer for United Fresh New Zealand.

Hans is the New Zealand Director of the International Federation for Produce Standards (IFPS) and chairs the IFPS Chain Information Committee.



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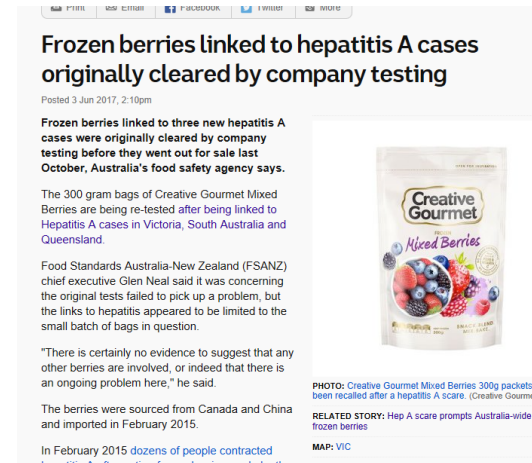
The Fresh Produce Safety & Traceability Challenge

Current Reality



A-NZ Fresh Produce 'Incidents' 2016/17 (RB)

- Rockmelon: Listeria 'by association'
- Gesagard® : Herbicide contamination
- Frozen berries: Hepatitis A virus
- Broccoli: Red back spiders
- F&V: EWG pesticides coverage
- Salads: Listeria contamination



Australian woman finds redback spider in her broccoli

One woman in Queensland got quite the surprise when cutting her freshly bought supermarket broccoli. Tamahra Moore, 32, said that while chopping her broccoli on Sunday, she spotted a fully-grown redback spider which gave her the shock of her life according to news.com.au.



NEW ZEALAND

LeaderBrand salads recalled from major supermarkets after listeria fears

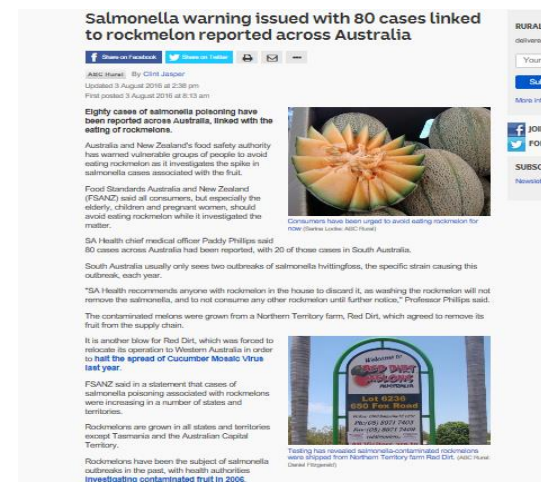
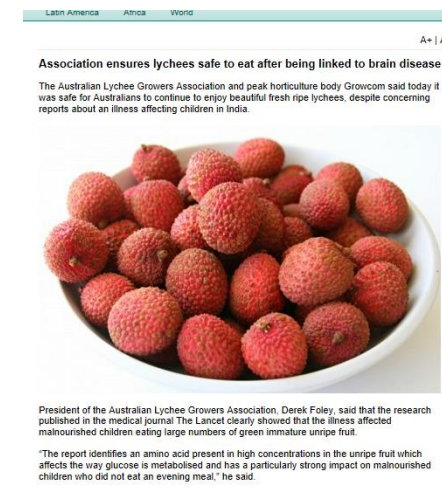
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© 2 minutes to read



A-NZ Fresh Produce 'Incidents' 2016/17 (RB)

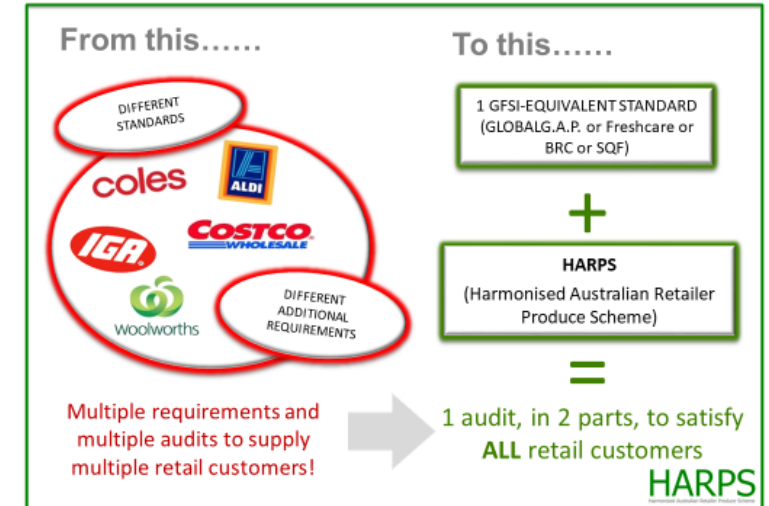
- Lychee: Brain disease, India
- Salads: Live frog
- Ramrod®: Herbicide contamination
- Salads: Salmonella internalisation
- F&V: Campylobacter in/from HB water supply
- F&V?: 72 Salmonella cases
- Rockmelon: Salmonella Hvittingfoss



Harmonised Australian Retailer Produce Scheme (RB)

- Multiple audits for multiple customers = stress + time + cost.
- 1st: GFSI base scheme
- 2nd: Harmonise the retailers' bolt-on's for direct suppliers
- 3rd: GFSI only for indirect suppliers
- Auditor competency scheme to follow
- NZ, Biosecurity, Labour standards to follow?

HARPS
Harmonised Australian Retailer Produce Scheme



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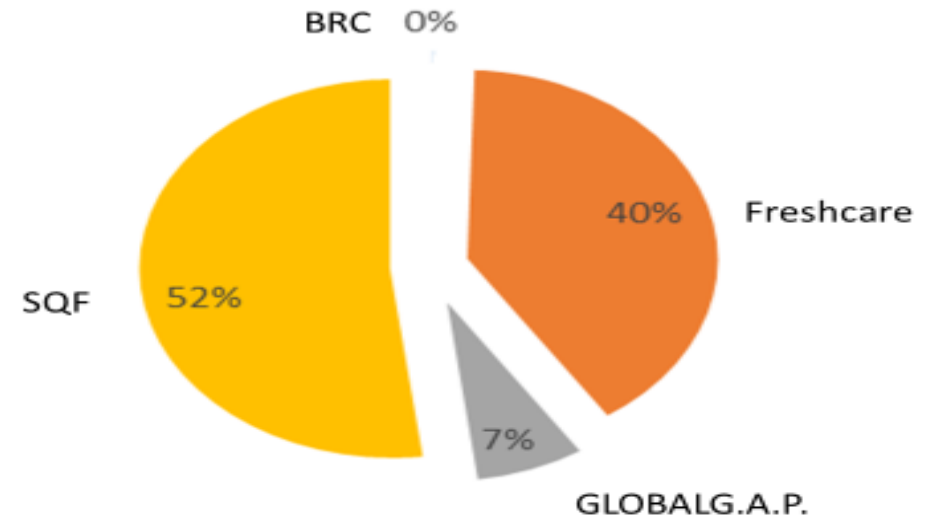
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Harmonised Australian Retailer Produce Scheme (RB)

- 'Bridge the Gap' auditor training ongoing
- HARPS management transitioning to PMA A-NZ
- Setting up HARPS Technical Advisory Group H-TAG
- Over 400 audits conducted so far
- Stress, time & costs?
- www.harpsonline.com.au



AUDITS BY BASE SCHEME



New Zealand Incorporated

Fresh Produce Safety Centre A-NZ (RB)

Research

- Identify priorities; commission & manage research projects

Outreach

- Provide information, news, education
- Forums and conferences

Collaboration

- Across all sectors of the A-NZ fresh produce supply chain
- Regulatory authorities
- Food Safety Centre, UTas; other universities
- Center for Produce Safety, USA; The New Zealand Food Safety Science and Research Centre

**FRESH PRODUCE
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AUSTRALIA & NEW ZEALAND

*A PMA A-NZ and
University of Sydney initiative*

Fresh Produce Safety Centre A-NZ (RB)

Research

- Guidelines for Fresh Produce Food Safety
- Understanding the Gaps
- Australian Research Council Centre for Food Safety in the Fresh Produce Industry
 - Nine PhD projects
 - Three themes: On-farm microbial risk; postharvest; risk assessments
 - A\$4 million including industry & government
 - Trans Australia, New Zealand (Pipfruit NZ, Plant & Food) and USA
- Hort Innovation projects
 - Pathogen persistence, mushroom food safety



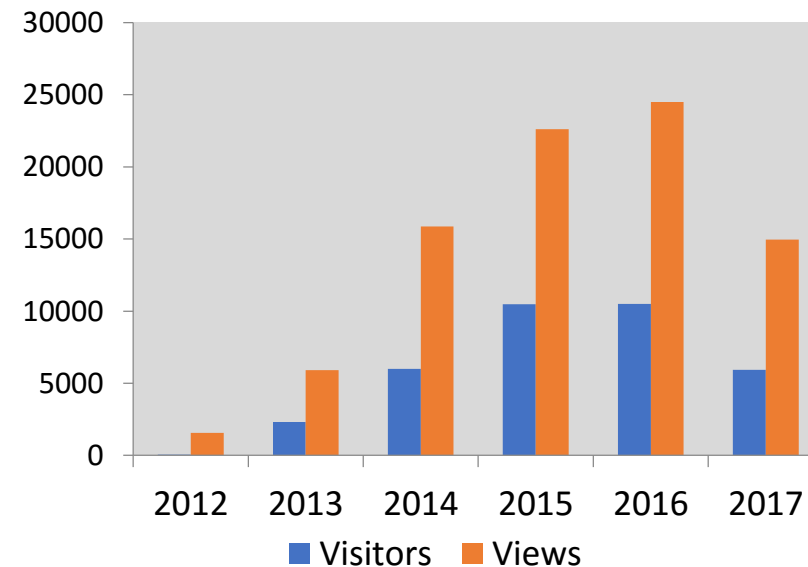
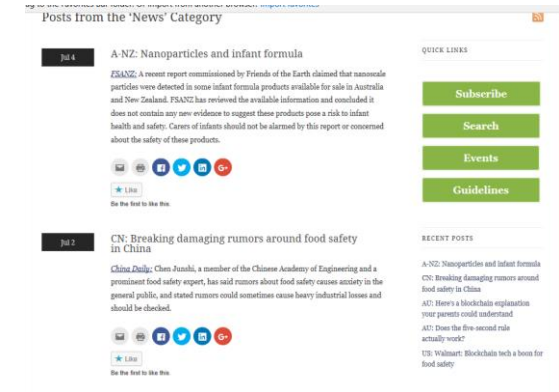
ARC TRAINING CENTRE FOR
**FOOD SAFETY IN THE
FRESH PRODUCE INDUSTRY**



Fresh Produce Safety Centre A-NZ (RB)

Outreach

- Website news
- Website resources
- Website hits
- Newsletter
- Conference
- Professional Development Events
- Advocacy - responding to negative media



FPSC Supported by Industry

Platinum supporters:



Silver supporters:



Bronze supporters:



Databar Status (Both)

- Roll-out was planned for 2010
- Primary focus has always been POS efficiency and accuracy
- Lag due to POS capital requirements
- Renewed retailer interest due to Food Safety assumptions
- A GS1 product based on global standards
- Purpose and use can not be changed in isolation



The Fresh Produce Safety & Traceability Challenge

Emerging Trends



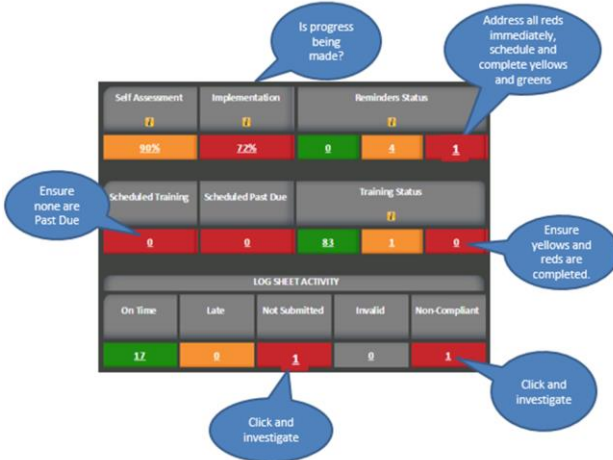
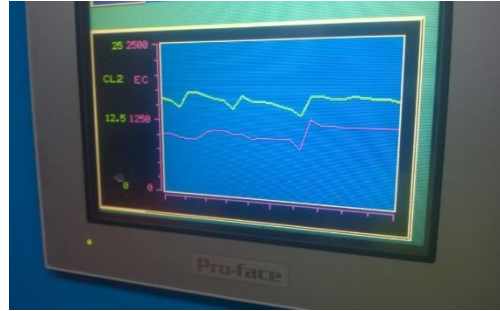
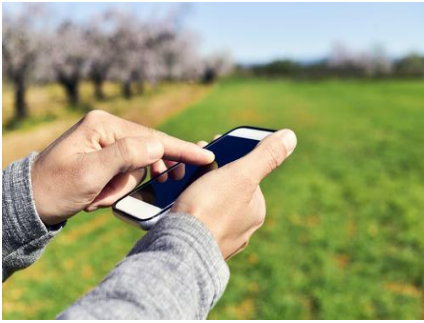
Food Act 2014 (HM)

- Not fully implemented until 2019
- Horticultural food producers and packing operations require National Program 1 Certification by 31 November 2018.
- Higher risk horticultural producers (e.g. bagged salad packers) must have a Food Control Plan as of 30 June 2017
- Produce will receive more attention than was initially planned
- Early distractions have been dealt with (fundraiser BBQ's, over-the-fence transactions)
- Organised and structured businesses will cope well with compliance
- The proverbial does hit the fan from time to time...



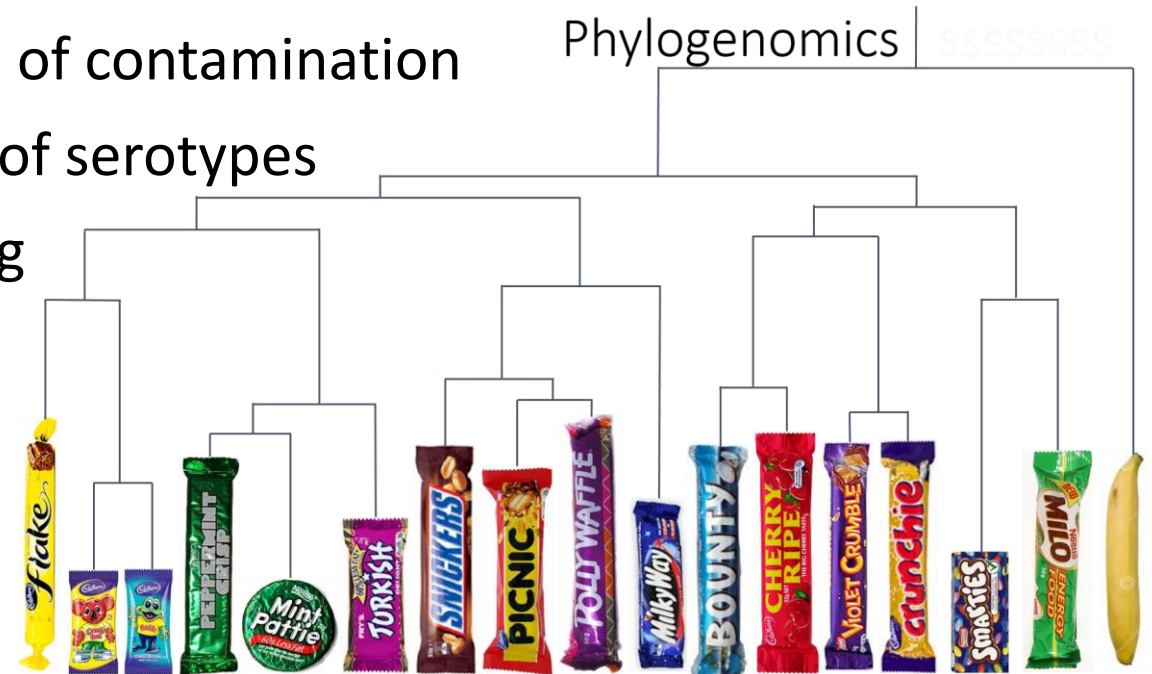
Technology developments (RB)

- From the very basic...
- To the not so basic...



Whole Genome Sequencing (WGS) ^(RB)

- High resolution ancestry of a pathogen
- A game changer for confirmation of source of contamination
- Serotypes compared to a database/library of serotypes
- Quicker and cheaper than traditional typing



Food Safety Culture 1 (HM)

- People
- Behaviours
- Standards
- Process
- Outcomes
- Validation

Creating a Culture of **Food Safety**



Food Safety Culture 2 (HM)

- The passage of time
- An open mind
- Disruptive technology
- Double loop learning
- Transparency
- A willingness to share



International Federation for Produce Standards (IFPS) ^(RB)

Objectives:

- Partner with industry stakeholders to improve supply chain efficiency of fresh produce through developing, implementing and managing harmonised international standards.
- To be a forum for comment and discussion on international standards issues affecting the produce industry.
- Recommend and advocate for appropriate courses of action in relation to international standards that affect the produce industry.
- Develop, implement and manage an international standard for Price Look Up (PLU) numbers.
- All other projects that advance our goals.



The Fresh Produce Safety & Traceability Challenge

The Road Ahead



Food Something (HM)

- Safety Science
- Protection
- Defense
- Integrity
- Security

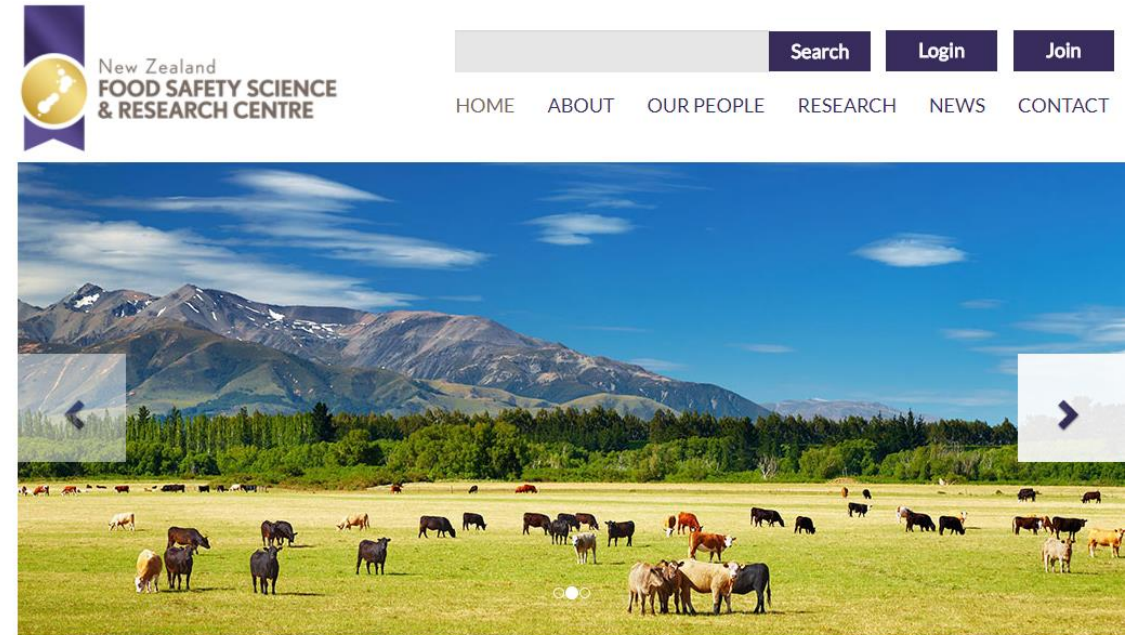


Food Safety Science (HM)

<http://www.nzfssrc.org.nz/>

The New Zealand Food Safety Science & Research Centre (NZFSSRC) was established to harness the best of scientific expertise from across industry, government and research providers.

Our aim is to provide an internationally credible science base for decision-making in public health and the food industry.



Protecting and enhancing New Zealand's reputation for world-leading food safety

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Food Protection (HM)

<http://www.crcc.nz/food-protection>

The objectives of the New Zealand-China Food Protection Network are:

- To strengthen connections and create new collaborations between organisations and scientists in New Zealand and China engaged in food safety and security research and policy-making
- Create an enduring “super-network” comprising food sector-specific hubs that can collaborate and bid for international research funding in food safety and security
- Complement and support the initiatives of wider government in both countries



New Zealand-China Food Protection Network

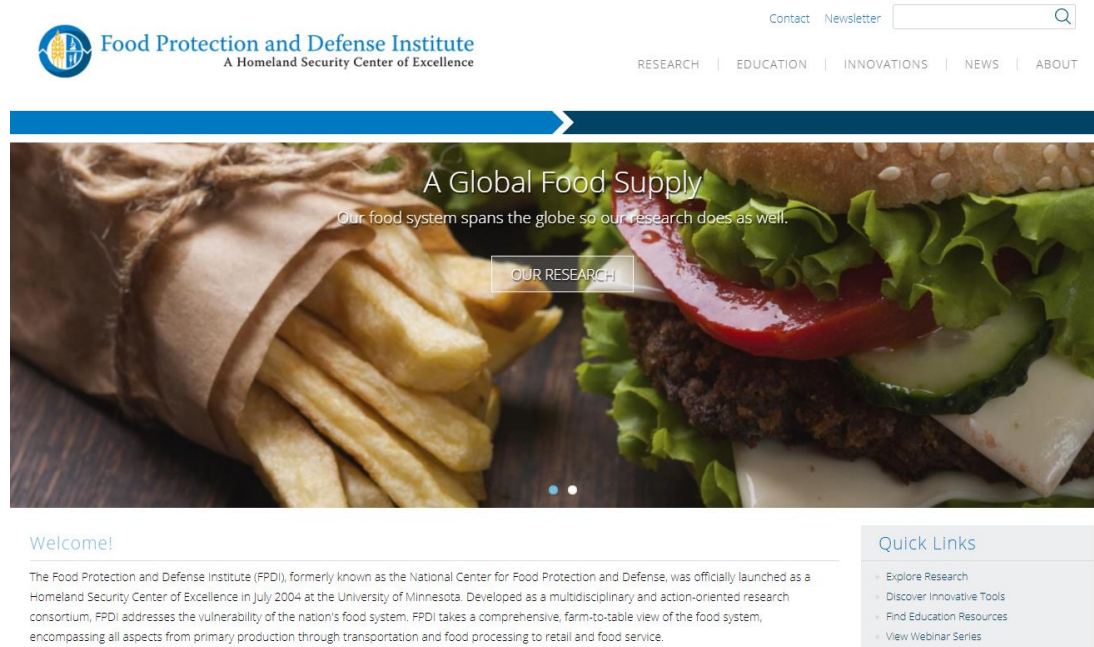
The New Zealand-China Food Protection Network, begun in July 2016, is one of three China Research Collaboration Centres (CRCCs) funded by the New Zealand Ministry of Business, Innovation & Employment. The Network is hosted by Massey University and involves nine research partners: AgResearch, Plant & Food Research, ESR, Cawthron Institute, Massey University, University of Otago, the University of Auckland, Auckland University of Technology and Scion.

Food Defense_(HM)

<https://foodprotection.umn.edu/>

FPGI takes a comprehensive, farm-to-table view of the food system, encompassing all aspects from primary production through transportation and food processing to retail and food service.

FPGI's research and education program is aimed at reducing the potential for contamination at any point along the food supply chain and mitigating potentially catastrophic public health and economic effects of such attacks. The program incorporates cutting-edge research across a wide range of disciplines, including supply chain management, logistics, epidemiology, risk assessment, economics, molecular biology, food microbiology, biomedical engineering, toxicology, information sharing, supply chain security, cyber security, and risk analysis.



Food Integrity (HM)

<https://www.asiapacificfoodintegrity.com/>



Asia Pacific Centre *for* Food Integrity

HOME

ABOUT

HOW

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FOOD INTEGRITY CONFERENCE

CONTACT

We are Food Strategists.

We use our extensive knowledge, networks and commitment to food safety to assist our clients to get their products to market.

We use our food safety knowledge to keep consumers safe in market.

Knowing your food product or knowing your market is not enough - you need a strategic approach to ensure that your food production systems remains relevant and safe.



We are FOOD STRATEGISTS
- we use our expertise and
networks to get safe food to
consumers

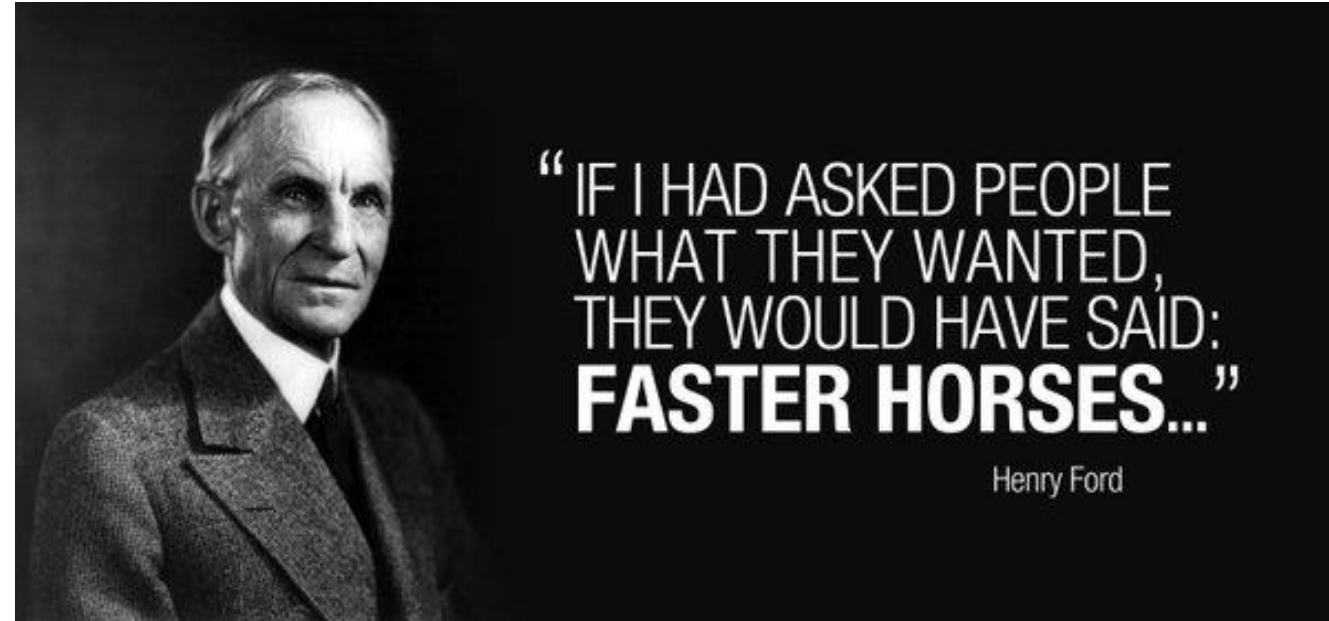
Food Security_(HM)

- Climate events
- Biosecurity events
- Political events
- Poor planning
- Sheer ignorance
- Not following due process
- Lack of over-arching strategy



Disruptive Technologies (HM)

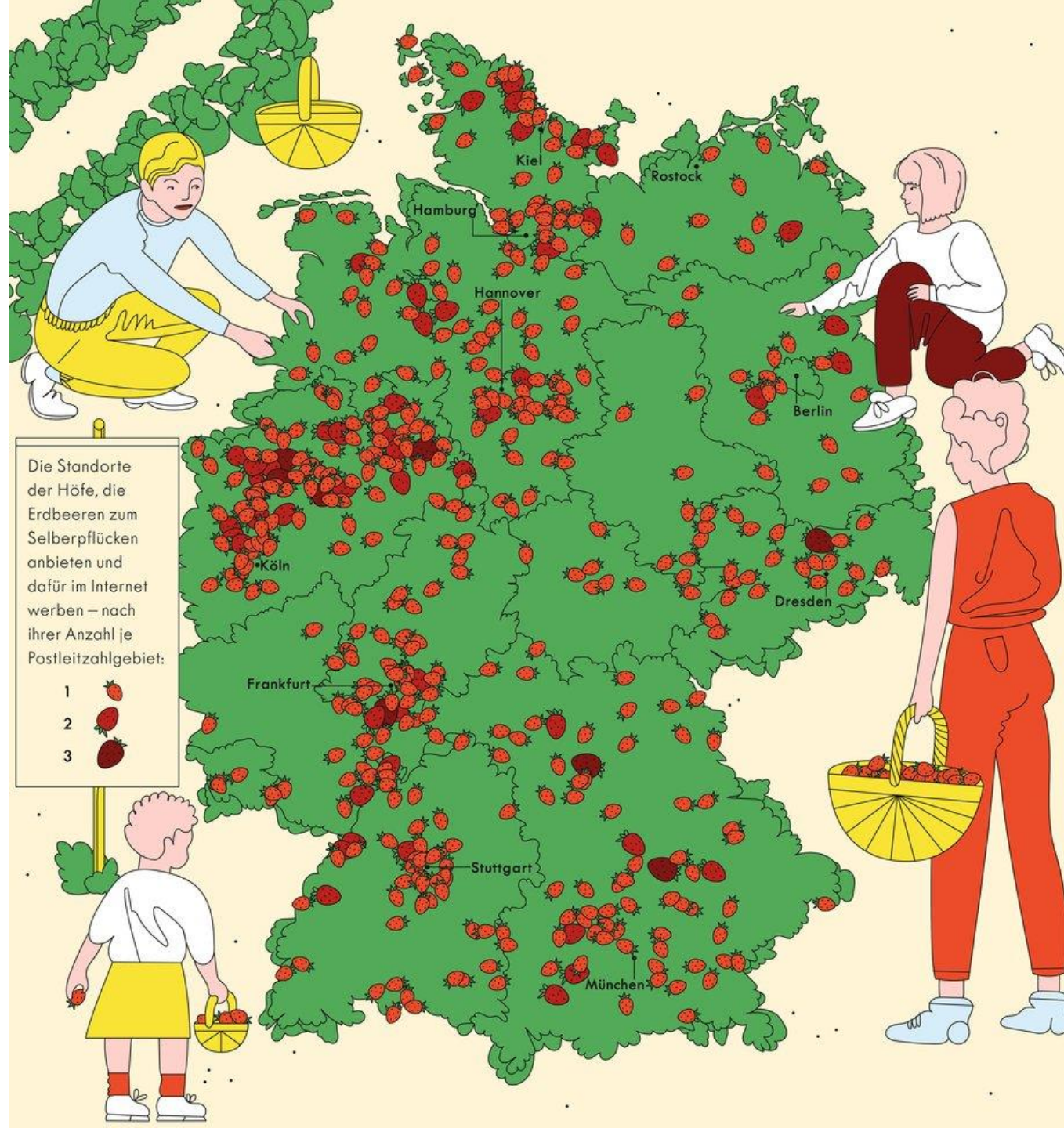
- Food lab on a microchip
- Social media marketing
- Urban farming
- Orchard and Paddock Robotics
- Drones using artificial vision algorithms
- Precision farming at single plant level
- Big Data analysis



Big Data & Produce _(HM)

- Deliberate data capture
- Incidental data capture
- Random data capture
- What use is data?
- Who owns data?
- The Big Data principle





Traceability Technology ^(RB)

Technology Options include:

- Barcodes (GS1 GLN, GTIN, DataBar)
- QSR codes
- Blockchains
- ??? Whatever next ???

Ultimate aim is transparency



Blockchain (HM)

- Blockchain is a generic transparency ledger, usable by any group of people in the business of passing goods and/or information along the chain they are part of.
- The virtual currency Bitcoin was created in part to demonstrate how blockchains could be used.
- Food Safety information has been identified as another management process that could be improved through blockchain technology
- Current triers involve Walmart, Fonterra, Alibaba, NZ Post and IBM amongst others



Q & A Session



Could this good looking gentleman come to the stage please?

If all else fails....

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