



**Freshcare Workshop: 11 – 12 April 2013**  
Sydney Masonic Centre

**“Filling the Knowledge Gaps: What are the Australian Food Safety Research Priorities?”  
Session Report**

A 90 minute session was held at the Freshcare Workshop on 11 April 2013 on “Filling the Knowledge Gaps: What are the Australian Food Safety Research Priorities?” The objective of the session to answer the question: “What unique fresh produce food safety challenges are there in Australia that we need answered by research to reduce risk?”

The participants at the workshop, individuals all actively involved in various aspects of food safety management in the fresh produce sector, were divided into 8 thematic groups with 6-7 participants per group. The groups were established based on responses to a survey send to prior to the workshop asking participants to rank food safety research priorities. The groups were:

- Water - Field Operations and Irrigation
- Water - Wash Water
- Microbial Research
- Pathogens in the Post-harvest Distribution Chain
- Compost and Organic Fertiliser Usage
- Harvest and Cooling Practices
- Chemical Residue Research
- Regulation and Protocols

In these groups, participants were asked to discuss the broad area they had been allocated in light of the session objective. They were then asked to determine specific research questions the group thought needed to be addressed in that area.



The groups and the research questions or areas of research were:

#### Water - Field Operations and Irrigation

- What are the critical limits for food safety pathogens in water applied to crops during production, including Australian regional/seasonal variations?
- What is the frequency of water testing required to assess the risk of the water source exceeding the critical limit (for different types of water sources)?

#### Water - Wash Water

- What is the best way of getting existing information and research on wash water to those who need it?
- What is the interaction of fungicides and sanitisers, and the potential impact on the efficacy of sanitising, post-harvest disease and food safety?
- What is the environmental impact of the disposal of treated wash water?

#### Microbial Research

- Is E.coli a suitable indicator for Salmonella/Listeria in Australia?
- Scoping study of bacterial loads on Australian fruit and vegetables to identify high/low risk crops/systems.

#### Pathogens in the Post-harvest Distribution Chain

- Is nil detection of Listeria in herbs and leafy greens practical?
- Does in-store handling of produce by staff and customers cause microbial contamination that was not present initially?
- What are effective methods of elimination of contamination by birds in packing sheds?
- What risks are posed by use of second hand/re-used packaging (cardboard and plastic crates)?
- What food safety risks are there from different cooling sections of supermarkets and different temperatures in these sections?

#### Compost and Organic Fertiliser Usage

- What are the risks to food safety in using compost teas?
- How do you define a compost tea and its safety, including identification of microbial contaminants and allergens?
- What are the risks and composition of these products?
- What management strategies can we employ to mitigate these risks eg testing, withholding periods, water quality/dilution?
- What is happening in other industries about compost and organic fertiliser use (eg current research and literature reviews)?

# FRESH PRODUCE SAFETY

AUSTRALIA & NEW ZEALAND

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THE UNIVERSITY OF  
SYDNEY



- How quickly do raw untreated products break down in soils to prevent contamination of products (we are currently using UK data for this and need data for Australia)?
- What are the different States' rules on biosolids?

## Harvest and Cooling Practices

- What are the risks from biofilms during harvest from poorly cleaned equipment that comes into contact with produce?
- What is the potential of the coolroom environment, including during transportation, to be a source of pathogens and to act as a vector in the cross-contamination of fresh produce?

## Chemical Residue Research

- Research into expanding chemical options for 'minor' crops.
- Is there an objective, scientific way of determining Minimum Residue Levels (MRLs), and why are there variations in MRLs in different countries?
- Research into the update of persistent chemicals by commodity; other factors that may influence uptake such as soils, environment etc.

## Regulation and Protocols

- Do regulations improve food safety?
- Case studies of international regulations.
- What are the drivers for implementation for food safety regulations?
- Mapping exercise on importing country requirements.
- Research on how effective regulations are on improving knowledge and trust in food safety by the consumer in Australia.