

A Report on the AgFutures Symposium

Improving food safety and traceability in horticulture

TropAg International Conference
Brisbane 31 October to 2 November 2022



Symposium speakers (left to right): Greg Calvert (FreshChain Systems), Dr SP Singh (NSW DPI), Jim Dodds (Safe Food Production Queensland), Dr Craig Shadbolt (NSW Food Authority), Joanna Rothwell (University of Sydney), Brian Witherspoon (Safe Food Production Queensland), and Terry O'Leary (Melons Australia and Paramagh Farming).

Improving food safety and traceability in horticulture

Author

Dr Sukhvinder Pal (SP) Singh, PhD

Research Horticulturist – Food Safety

NSW Department of Primary Industries

The University Campus, North Loop Road, Ourimbah NSW 2258

Locked Bag 26, Gosford, NSW 2250 Australia

T +61 (2) 4348 1935

M +61 420 593 129

E sp.singh@dpi.nsw.gov.au

The key recommendations from the symposium are:

- **using a through-chain systems approach for managing food safety risks, with a well-designed and inclusive support system for primary producers and processors**
- **investing in science- and data-driven approaches to develop and implement best practices to mitigate food safety risks and enable food safety compliance**
- **having technical expert ‘boots on the ground’ to support growers in improving their food safety systems, with practical considerations in risk assessments and management strategies**
- **following the innovative food safety research, development and adoption model used in the NSW DPI-led ‘Safe Melons’ program that is nationally recognised by multi-stakeholders for its positive and tangible effects across the supply chain**
- **accelerating the adoption of digital traceability to reduce the food safety incident impact and response time. The benefits of digital traceability outweigh the costs of implementing a solution that is based on GS1 global standards and is widely acceptable**
- **making national funding available to support the industry while it is transitioning to a regulatory regime. The success of national traceability grants commissioned by the Australian government is exemplary in laying the foundation for building traceability capacity and capability in the fresh produce industry**
- **continuing collaboration and cooperation through information and data sharing among researchers, regulators, and industry.**

With the introduction of [primary production and processing \(PPP\) standards](#) for berries, leafy vegetables and melons, the Australian horticulture industry is partially transitioning into the food safety regulatory regime. The following 2 years (2023–2024) are a window of opportunity for preparedness, raising awareness about regulatory changes, implementing food safety controls, and developing technical resources and support systems for growers and packers. These standards will be enforced from 12 February 2025.

To examine the preparedness and support for these sectors, Dr SP Singh from the NSW Department of Primary Industries (NSW DPI) convened a symposium on ‘improving food safety and traceability’ during the TropAg International Conference in Brisbane. A diverse group of speakers and participants representing supply chain stakeholders attended the symposium, including food regulation and enforcement experts, produce safety researchers, technology and solution providers, industry representatives and growers.

Jim Dodds, CEO Safe Food Production Queensland, chaired the symposium and emphasised the importance of a through-chain systems approach in managing food safety risks in collaboration with the industry.

Dr Craig Shadbolt, a leading expert from the NSW Food Authority, provided an overview of the recent foodborne illness outbreaks and product recalls linked to fresh produce. He highlighted how critical ‘time’ is during an incident response in accurately identifying the outbreak source and tracing in the increasingly intricate and complex produce supply network.

Brian Witherspoon from Safe Food Production Queensland talked about the rationale of the new PPP Standards. He emphasised developing and nurturing a food safety culture led by the industry as a suitable approach, rather than purely relying upon regulatory instruments.

After the regulators perspective, Dr Singh described the role of the research, development and adoption (R,D&A) model in enabling food safety compliance: ‘Grower engagement is the key, but it starts with basic questions such as who and where they are, what are they growing and how are they growing it? Agronomy, pest, and disease management topics are low-hanging fruits on the grower engagement tree, but food safety discussions are highly sensitive and private. Respecting privacy and business confidentiality are essential for a long-term trusted relationship with growers while dealing with food safety’ he said.

Being an influencer in produce safety and known for implementing science-based solutions in the melon industry, he advocated the need for grassroots level support during the transition to the regulatory regime with best practice technical resources, training, and education for growers and packers.

FreshChain Systems co-founder Greg Calvert shared user case studies on the digital traceability pilot trials they have conducted in partnership with NSW DPI and other supply chain participants. He highlighted the capability of their platform in ensuring through-chain traceability in complex supply chains.

A PhD researcher, Joanna Rothwell, presented her findings about how mixing sanitisers and fungicides during postharvest washing and sanitisation could lead to undesirable consequences, potentially negating the benefits of these chemicals. Joanna’s research project was co-funded and supported by NSW DPI.

Terry O’Leary, a fifth-generation grower from Chinchilla, highlighted the rise in consumers’ expectations and regulators’ requirements and their economic and compliance burden on small- to medium-scale growers. Ethically and sustainably producing and supplying high-quality produce without an economic incentive at the retail end is a real challenge for primary producers under the current conditions. He advocated the importance of geographically spread small- and medium-scale growers in providing food security to the country if there were natural disasters, biosecurity and food safety outbreaks affecting large growers or major production hubs.

Terry applauded and attributed the success of the ‘Safe Melons’ program to grower engagement, collaboration and data sharing across the supply chain that allowed targeted interventions and predicted patterns to reduce the risks. He called for face-to-face engagement for better adoption outcomes.

Several projects on improving produce safety and traceability that were funded by Hort Innovation, Australian Department of Agriculture, Fisheries and Forestry, NSW DPI and Melons Australia were also presented in this symposium.

For further information, please contact Dr SP Singh at sp.singh@dpi.nsw.gov.au or 0420 593 129.

A Report on the AgFutures Symposium:

Improving food safety and traceability in horticulture