



Supporting Document 3

Review of Food Safety Systems in Australian Horticulture
(December 2011)

Proposal P1015

Primary Production & Processing Requirements for Horticulture

Note:

This document is based on existing information that will be subject to change as new information becomes available. Every effort was made to check that the information in this document is accurate and representative but the authors are not responsible for any factual errors.

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Executive Summary

Food Standards Australia New Zealand (FSANZ) contracted TQA Australia to update a report completed in 2006 titled *Identification of Food Safety Systems in Australian Primary Production Industries*.

In this report, nine food safety systems were selected. These nine systems are believed to be the most widely accepted 3rd party audited systems in Australian horticulture at this time.

There were two parts to this project. The first was to determine the level of participations in these food safety systems in Australia horticulture. This was the more challenging part of the project for a number of reasons.

1. In order to understand how many producers were certified, the number of horticultural producers in Australia had to be established. There are a number of organisations that collect information relating to the number of producers including the Australian Bureau of Statistics, Horticulture Australia Limited and the peak industry bodies (i.e. AUSVEG, Apple and Pear Limited, Australian Banana Growers Council), however these numbers often differ, sometimes significantly.
2. Again, a number of organisations collate information on food safety system certifications. These include systems owners and Certification Bodies. These organisations were contacted, however not all organisations were willing to provide the information. Some were able to provide information on number of certifications, but were unable to break the number down by industry sector.
3. As many producers maintain certifications to multiple systems, the number of certifications doesn't actually relate to the number of producers.

For these reasons, it is impossible for TQA Australia to make a calculation on the numbers of certifications held by horticultural producers.

The second part of the project focused on the agreed systems. A review of the current versions of the systems was conducted, breaking the systems down into a number of broad topics. These topics included:

- Regulatory requirements
- Control of inputs
- Good Manufacturing Practices (GMP)
- Good Agricultural Practices (GAP)
- Control of storage
- Control of processing / preparation / handling
- Transport
- Calibration
- Control of plant and equipment
- Cleaning schedule / sanitation
- Pest control
- Product identification and traceability
- Control of use of chemicals
- Training
- Personal hygiene

In this report, we also included two additional areas – how microbiological hazards are dealt with on-farm, and the auditing of the systems (frequency, training and qualifications for auditors, corrective actions).

Overview

TQA Australia has been involved with interpretation, training, development, implementation and maintenance of food safety and quality assurance systems relevant to primary production for more than 13 years. The organisation has worked with various industry sectors including beekeeping, egg production, organic production, intensive horticulture, secondary industry, processing, transport and whole of supply chain projects.

In September 2005, TQA Australia was engaged by Food Standards Australia New Zealand (FSANZ) to identify and review a range of food safety / quality assurance programs and codes of practice used at that time within the plant and plant products, eggs and honey industry sectors in Australia. This review was completed in 2006. In this current review, TQA Australia has reviewed the systems that are most commonly used in Australian horticulture.

Systems included in the analysis

The systems reviewed as part of this process were chosen in collaboration with Food Standards Australia New Zealand. These systems are currently the most widely adopted in the horticultural sector, and all are third-party audited. The systems are listed in Table 1, along with the version / issue number included in the 2006 review.

Since the review completed by TQA Australia in 2006, each of the systems selected have been updated at least once, with two new systems reviewed – Salad GAP and Coles Requirements.

Table 1: Agreed list of systems / codes of practice for inclusion in the review

Current version / issue number	Version / issue number from 2006 review
BRC Global Standard for Food Safety – Issue 6 – July 2011	BRC Global Standard Food - Issue 4 2005
Coles Supplier Requirements – Food (CSR-FV3 May 2011)	Not reviewed
Freshcare Code of Practice (3rd Edition – July 2009)	Freshcare Food Safety and Quality – (2 nd Edition – October 2004)
GlobalG.A.P Integrated Farm Assurance – Version 4.0_Mar2011	EurepGAP Fruit and Vegetable Protocol (Version 2.1 Oct-04)
Salad GAP – Version 1.1 (September 2008)	Not reviewed
SGS HACCP – Client Audit Checklist Version 2.7 (19/06/2011)	SGS HACCP Checklist (FS SGS HACCP 010705)
SQF2000 Code – 6th Edition August 2008 – Amended July 2010 (Level 3)	SQF 2000 Code (5th Edition – Issue November 2005)
SQF1000 Code – 5th Edition August 2009 – Revised January 2010 (Level 3)	SQF 1000 Code (4th Edition – Issue November 2005)
Woolworths Quality Assurance – Primary Production – Produce – Version 7 January 2011	Woolworths Quality Assurance Standard (Version 3, April 2006)

Table 2: Applicability of system across the food supply chain

System / code of practice and current version	Primary producer	Transport ¹	Packer	Processor	Transport ²	Food manufacturer	Wholesaler	Retailer / Food service
Salad GAP – Version 1.1 (September 2008)	✓	x	x	x	x	x	x	x
Freshcare Code of Practice (3rd Edition – July 2009)	✓	✓	✓	x	x	x	x	x
SQF1000 Code – 5th Edition August 2009 – Revised January 2010 (Level 3)	✓	✓	✓	x	x	x	x	x
GlobalG.A.P Integrated Farm Assurance – Version 4.0_Mar2011	✓	✓	✓	x	x	x	x	x
Additional Coles Supplier Requirements – Food (CSR-FV3 May 2011) ³	✓	x	✓	✓	x	✓	x	x
Woolworths Quality Assurance – Primary Production – Produce – Version 7 January 2011	✓	✓	✓	✓	✓	x ⁴	✓	x
SGS HACCP – Client Audit Checklist Version 2.7 (19/06/2011)	✓	✓	✓	✓	✓	✓	x	x
BRC Global Standard for Food Safety – Issue 6 – July 2011	x	x	✓	✓	✓	✓	x	x
SQF2000 Code – 6th Edition August 2008 – Amended July 2010 (Level 3)	x	x	✓	✓	✓	✓	✓	x

¹ Transport from primary producer to packer / processor.

² Transport from packer / processor to distribution centre / wholesaler / retailer / storage.

³ Suppliers are required to be certified to Coles Requirements in addition to another approved standard such as SQF 2000, Freshcare or BRC.

⁴ Food manufacturers are covered under a different WQA Standard (Manufactured Foods)

Table 3: Supply chain sector definitions

The following definitions have been duplicated from the 2006 report – *Identification of Food Safety Systems in Australian Primary Production Industries*. The definitions will act as the basis for common understanding between FSANZ and TQA Australia.

DEFINITIONS

Primary Producer	The growing, picking and harvesting of food. Includes: (a) the transportation or delivery of food on, from or between the premises on which it was grown, picked or harvested; (b) the storage of food on the premises on which it was grown, picked or harvested. Primary production does not include the sale or service of food directly to the public. <i>Examples: growing oranges, shooting game, keeping bees.</i>
Transport	The activity associated with moving food within a supply chain, including from or between the premises on which it was grown, picked or harvested to the packer, processor, wholesaler, retailer, and/or food manufacturer.
Packer	The entity responsible for placing food in a receptacle safe and suitable for its intended use. It does not include the manufacture or preparation of food as described within the definition for processor or food manufacturer. <i>Examples: placing apples in boxes, placing onions into bags.</i>
Processor (undertakes minimal processing)	Minimally processing includes peeling, cutting, and treating with permitted processing aids and food additives. Minimal processing does not: (a) change the character or inherent nature of the food: or (b) include the packing of food at the time of sale and in the presence of the purchaser. <i>Examples: dried fruits, frozen vegetables.</i>
Food Manufacturer	The entity responsible for the processing, working, development, change, conditioning or reconditioning of raw materials or products into products of a different character, or effecting any combination or composition of materials, the inherent nature of which is changed such that the resulting product is food for consumption, beyond that which is classed as minimally processed. <i>Examples: potato chips, frozen meals, fruit juices.</i>
Wholesaler	The entity responsible for selling food (usually in large quantities) to be retailed by other. <i>Example: fruit and vegetable market.</i>
Retailer / Food service	The entity responsible for selling food to an end customer or consumer. <i>Example: supermarket, greengrocer</i>

Uptake of food safety systems

One of the aims of this project was to determine the level of uptake of food safety systems in the Australian horticultural industry.

Number of horticultural producers in Australia

In order to determine the number of horticultural producers in Australia, we contacted the Australian Bureau of Statistics (ABS) and Horticulture Australia Limited (HAL). As the figures generally used by HAL are sourced from the ABS the ABS figures have been used for this project.

There are two important things to note about the ABS numbers:

1. When compiling the raw data, producers were asked to identify their main activity. This means that if a producer is running livestock as their main activity, but grows a small amount of vegetables for the processing sector, they will be put into the category of Beef Farming, rather than the category of Vegetable Growing.
2. As only the main activity is reported, those that grow vegetables *and* fruit will only be put into one of these categories.

Peak industry bodies were contacted (refer to Appendix 1) and were asked to provide the number of horticultural producers in their sector. Some of these figures were based on the number of levy payers / registered growers, others were based on estimates. This task was complicated by the fact that some commodities have multiple representative bodies, each of which reported different numbers.

Appendix 2 details the number of horticultural producers by commodity provided by the Australian Bureau of Statistics, and peak industry bodies.

Uptake of food safety systems

To determine the level of uptake of food safety systems, both Standard Owners and Certification Bodies were approached to provide details of the number of current certifications held by horticultural producers.

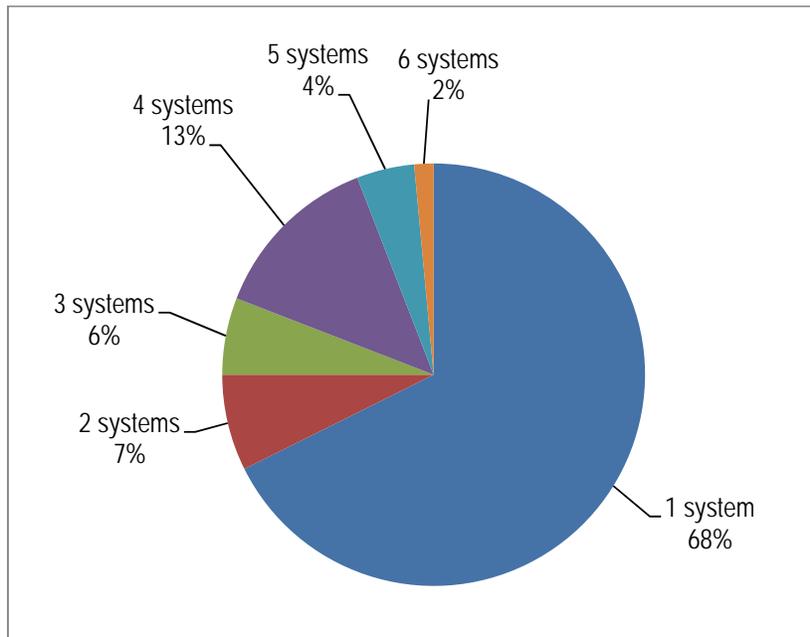
Table 4 details the number of known certifications. These numbers have been sourced from both the owners of each standard, and from a number of Certification Bodies.

As with the numbers of horticultural producers, it was difficult to determine the exact number of certifications held by horticultural producers in Australia. A complicating factor in trying to determine the number of certifications was that many producers are certified to more than one 3rd-party audited standard. In a recent survey conducted by TQA Australia, 32% of respondents indicated that they were certified to more than standard (see Figure 1).

To facilitate research and planning, a solution to this issue may be to develop a centralised database where all 3rd-party certifications are registered. This is unlikely to gain support from producers, Certification Bodies or Standard Owners, many of who consider such information to be commercial-in-confidence.

Table 4 details the number of certifications to each of the selected 3rd-party audited systems as provided by Certification Bodies and Standard Owners.

Figure 1 – Number of systems⁵



⁵ Quantifying the Cost of Compliance with Quality Assurance – Tundra Howe (HG10024)

Table 4: Number of certifications

Standard name	Numbers in Australia		Comments
	Standard owner	Certification Bodies (CB)	
BRC Global Standard for Food Safety – Issue 6 – July 2011	3 ⁶	27	<i>Numbers from CB's include meat establishments (CB's unable to sort)</i>
Coles Supplier Requirements – Food (CSR-FV3 May 2011)	>600 ⁷	499	
Freshcare Code of Practice (3rd Edition – July 2009)	2797 ⁸	3157	<i>CB's may include those that have chosen to be suspended or have withdrawn themselves from the program in the last year.</i>
GlobalG.A.P Integrated Farm Assurance – Version 4.0 Mar2011	112 ⁹	97	
Salad GAP – Version 1.1 (September 2008)	51 ¹⁰	0	<i>No Salad GAP numbers provided by any Certification Body</i>
SGS HACCP – Client Audit Checklist Version 2.7 (19/06/2011)	-	2934	<i>This number includes other food manufacturers and processors (not just restricted to horticulture)</i>
SQF2000 Code – 6th Edition August 2008 – Amended July 2010 (Level 3)	40 ¹¹	493	<i>This number includes other food manufacturers and processors (not just restricted to horticulture). CB's unable to sort between 1000 and 2000.</i>
SQF1000 Code – 5th Edition August 2009 – Revised January 2010 (Level 3)	76 ¹²		
Woolworths Quality Assurance – Primary Production – Produce – Version 7 January 2011	Unavailable	838	

⁶ Sourced from British Retail Consortium Certification database (via BRC website)

⁷ Pers. Comm – Marion Bray (Coles)

⁸ Sourced from Freshcare Limited

⁹ JAS-ANZ Certification database (via JAS-ANZ website)

¹⁰ Sourced from Freshcare Limited

¹¹ Sourced from SQFI Certification database (via SQFI website)

¹² Sourced from SQFI Certification database (via SQFI website)

Table 5: Topics by systems

Standard name	Regulatory requirements	Approved suppliers	Control of inputs	Good Manufacturing Practices (GMP)	Control of processing / preparation / handling	Calibration	Training	Cleaning schedule / sanitation	Pest control	Personnel hygiene	Control of use of chemicals	Transport	Product recall	Product identification and traceability	Control of storage	Premises construction / maintenance	Control of plant and equipment	Good Agricultural Practices (GAP)	HACCP Plan
Additional Coles Supplier Requirements – Food (CSR-FV3 May 2011)	✓	✓	✓	✓	✓	✓	✓	x	x	x	x	x	x	x	x	x	x	x	x
Salad GAP – Version 1.1 (September 2008)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	x	x	x	x	✓	✓	✓	x
GlobalG.A.P Integrated Farm Assurance – Version 4.0_Mar2011	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	x	x	✓	x
Freshcare Code of Practice (3 rd Edition – July 2009)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	x
BRC Global Standard for Food Safety – Issue 6 – July 2011	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	x	✓
SQF2000 Code – 6th Edition August 2008 – Amended July 2010 (Level 3)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	x	✓
SGS HACCP – Client Audit Checklist Version 2.7 (19/06/2011)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SQF1000 Code – 5th Edition August 2009 – Revised January 2010 (Level 3)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Woolworths Quality Assurance – Primary Production – Produce – Version 7 January 2011	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Legend

	HACCP plan not included (4)		Cleaning schedule / sanitation not included (1)
	Good Agricultural Practices not included (3)		Pest control not included (1)
	Control of storage not included (2)		Product recall not included (2)
	Transport not included (2)		Product identification and traceability not included (2)
	Premises construction / maintenance not included (2)		Personnel hygiene not included (1)
	Control of plant and equipment not included (2)		Control of use of chemicals not included (1)

BRC Global Standard for Food Safety – Issue 6 – July 2011

General information

In 1998 the British Retail Consortium (BRC) developed and introduced the BRC Food Technical Standard as a tool for evaluating the manufacturers of various retailers' own brand food products. The BRC Global Food Standard is designed for packers and processors only and is not an on-farm assurance standard

BRC believe that their standard will assist retailers and brand owners to produce food products of consistent safety and quality and assist with their 'due diligence' defence, should they be subject to a prosecution by the enforcement authorities.

Following widespread acceptance of the BRC Food Technical Standard, the BRC published the first issue of the Packaging Standard in 2002, followed by the Consumer Products Standard in August 2003 and finally by the BRC Global Standard - Storage and Distribution in August 2006. Each of these Standards is revised and updated at least every 3 years, following extensive consultation with a wide range of stakeholders.

The BRC Global Standard for Food Safety Issue 6 was extensively revised in 2011, with Version 6 superseding Version 5 on 1 January 2012 following a transitional period during which existing certification to Version 5 was still recognised . The key changes in Version 6 are:

- Expanded sections on foreign body control, hygiene and housekeeping, and allergens
- Introduction of a voluntary, 2 stage unannounced audit scheme
- A reduction in the number of clauses, in order to ensure that each expresses a significant idea. This will contribute to consistency of grading, by auditors.

According to the British Retail Consortium, the major benefits of the BRC Global Standard for Food Safety include:

- A comprehensive focus on safety, legality and quality.
- Clear and detailed requirements based on HACCP principles, supported by documented systems within the certified business.
- Standardised reporting format providing information on how sites meet the requirements of the Standards.
- Closure of all non-conformities identified at an audit with evidence included in the report before Certificates can be issued.
- Complementary with existing quality management systems e.g. ISO and HACCP where these meet the requirements of the Standard.

The BRC Standard has a number of overarching banner statements that describe the 'intent' of each section. A number of these are considered 'fundamentals'. Fundamentals must be complied with in order to gain compliance with the standard.

Applicability across the supply chain

The scope of the BRC standard is:

“...the manufacture of processed foods and the preparation of primary products supplied as retailer branded products, branded food products and food or

*ingredients for use by food service companies, catering companies and food manufacturers*¹³.

Certification only applies to the products if they are manufactured or prepared at the site where the audit has taken place. The BRC Standard does not cover activities on-farm, even if the produce has been grown at the same site of the packing facility.

This standard does not cover transport, distribution or storage outside the direct control of the company. Other standards within the BRC suite cover these activities.

BRC is widely recognised in export markets, particularly the EU and UK, and appears to be gaining traction in the USA. In Australia, only Coles recognises BRC as an acceptable standard for direct suppliers.

Uptake of the scheme within the sector

As the BRC Standard is not applicable on-farm, there are a limited number of businesses certified to it. BRC have a publicly available database that can be searched for certified businesses. A search of that database reveals 3 certified businesses involved with fruit and vegetable production in Australia. One in South Australia that packs almonds, another in NSW involved in packing, storing and dispatching fresh produce (this business also has two other sites in NSW and QLD) and another in Tasmania that packs and exports onions.

Auditing of each system

Certification Body requirements

All audits against the BRC Global Standard are completed by approved third party Certification Bodies (CB) who must be independently accredited by a National Accreditation Body such as JAS-ANZ. The performance of CB's is reviewed every six months, and is given a performance rating based on these reviews.

According to the BRC directory there are currently 8 CB's located in Australia able to conduct audits against the BRC Global Standard for Food.

Auditor requirements

According to the BRC website, generally auditors are required to have:

- an appropriate higher education qualification such as a degree or diploma.
- appropriate post qualification work experience (around 5 years in industry).
- a recognised third party auditor qualification.
- qualification in HACCP or risk assessment.
- audit experience – generally a specified number of audits including those against BRC Global Standards.
- completed BRC training in the specified Global Standard.

Audit frequency

Audit frequency is based on the outcome of each audit. A table is included in the BRC Standard that outlines the frequency, however audits are conducted on at least an annual basis. If 21-30 minor non-conformances are identified, or more than one major non-conformance is found, audit frequency is reduced to 6 months.

¹³ BRC Global Standard for Food Safety – Version 6 (page 4)

Audit timing

New sites should have been operating for at least three months in order to generate enough evidence in order for the auditor to confirm compliance with the standard.

The business must ensure that the production program at the time of audit covers products for the intended scope of the certification. If there is more than one product to be included in certification, the majority of these must be in production for the auditor to assess. This may mean a separate audit at another time of year, depending on the timing of the production run of each product.

Manner of dealing with corrective actions

There are three levels of non-conformity:

- Critical – where there is a failure to comply with a food safety or legal issue.
 - Major – where there is a substantial failure to meet the requirements of a banner statement or any clause of the Standard or a situation that is identified which would raise significant doubt as to the conformity of the product being supplied.
 - Minor – where a clause has not been fully met but the conformity of the product is not in doubt.
- If a critical non-conformance is raised, certification will not be granted, and the site will be required to complete another full audit before certification is granted. This audit cannot occur within 28 days of the initial audit.
 - If a major or minor non-conformance is identified, objective evidence must generally be provided within 28 days of audit. If this evidence is not provided within 28 days, it is possible that another audit may need to be undertaken.

How microbiological hazards are addressed

Apart from a reference to potable water, no other microbiological limits have been set in this standard.

Microbiological hazards are addressed in a number of sections of the BRC Standard. The following clauses have been identified as pertaining to, or aimed at controlling, microbiological hazards. These clauses are:

- Where legislation specifically permits the use of water which may not be potable for initial product cleaning, the water will meet the designated legal requirements for this operation (4.5.3).
- Any laboratory used to conduct analyses critical to product safety or legality will have recognised accreditation, or operate in accordance with ISO17025 (or similar) (5.5.2.3).
- Procedures must be in place to ensure reliability of lab results (other than those critical to product safety or quality) (5.5.2.4).
- A risk assessment to identify potential risks to product safety, legality and quality from raw materials will be conducted (3.5.1.1).
- Specifications for raw materials and packaging will be developed, ensuring compliance with food safety and legislation, including defined limits for relevant attributes (chemical, microbiological, physical) (3.6.1).
- Further requirements for raw materials, packaging and finished products and any other product or service that may affect the food safety of the finished product are outlined (3.6.2 - 3.6.5).
- Documented procedures to maintain product safety and quality during storage will be implemented and understood by relevant staff. These may include managing chilled and frozen temperatures, segregation to avoid cross-contamination, storing materials off the floor and away from walls and specific handling and stacking requirements (4.14.1).

- Where temperature control is required, the storage area will be capable of maintaining product temperature within specification. Temperature recording equipment with alarms will be fitted or a system of manually checking the temperature at a defined frequency will be in place (4.14.2).
- Water used either as a raw material, in the preparation of product or for cleaning will be in sufficient quantity, potable at point of use, or pose no risk of contamination (according to applicable legislation). Microbiological and chemical testing will be conducted at least annually, with the frequency and sampling point based on risk (4.5.1).
- A scheduled programme of testing (including products and the processing environment) will be in place, covering microbiological, physical, chemical and organoleptic testing (5.5.1.1).
- Test and inspections records will be kept and reviewed to identify trends (5.5.1.2).
- Shelf-life assessment will be completed. This will be based on risk and include microbiological and sensory analysis. Records will be kept, and results will be used to validate shelf-life (5.5.1.3).
- Pathogen testing will be contracted to an external lab, or if conducted internally, the lab will be segregated from the manufacturing site and have procedures to prevent contamination (5.5.2.1).
- Controls must be in place for on-site laboratories covering location, construction and design (5.5.2.2).
- Documented procedures to maintain product safety and quality during loading and transport will be implemented. These may include managing temperatures of loading dock areas, use of covered bays, securing loads to prevent movement and inspection of loads (4.15.1).
- Vehicles will be able to maintain required temperatures with minimum and maximum loads. Data loggers or a record of manually checking temperatures will be in place (4.15.4).
- Hand washing facilities at access points, and within production areas must be equipped with water at a suitable temperature, liquid soap, single use towels or air dryers, hands-free operated water taps and hand washing signs (4.8.6).
- Hand cleaning will be performed upon entry to production areas and at an appropriate frequency (7.2.2).

Regulatory requirements

The BRC Standard states that it:

“...has always been intended to assist sites and their customers to comply with legislative requirements for food safety.”

Specific clauses within the standard that refer to regulatory or legislative requirements are:

- A documented policy stating the company's intention to produce safe, legal products, signed by the person with overall responsibility and communicated to all staff (1.1.1).
- Clear objectives to maintain and improve the safety, legality and quality of produce. Objectives are documented, with targets, clearly communicated and monitored with results reported quarterly (1.1.2).
- A system is in place to ensure the company is kept informed of scientific developments, industry codes of practice, and relevant legislation in both countries of production and where produce is intended to be traded (1.1.6).
- Where required by legislation, the site will be registered with or approved by the appropriate authority (4.2.3).
- Where legislation specifically permits the use of water which may not be potable for initial product cleaning, the water will meet the designated legal requirements for the operation (4.5.3).

- Frequency and methodology of quantity checking shall meet requirements of legislation governing quantity verification. Records are maintained (6.2.1). If not governed by legislation, the product must meet customer requirements (6.2.2).

HACCP plan

- Senior management must provide sufficient resources to produce food safely in compliance with the standard and for implementation of the HACCP-based food safety plan.
- A multidisciplinary food safety team will develop and manage the HACCP Plan. The team leader will have an in-depth knowledge of HACCP and be able to demonstrate competence and experience. The team will have knowledge of HACCP and knowledge of the product, process and hazards (2.1.1).
- Pre-requisite programs will be developed, including cleaning, pest control, personal hygiene, staff training, purchasing, allergens etc. These programs will be reviewed as part of the HACCP Review process (2.2.1).
- The scope of the HACCP plan will be defined. For each product in the scope, a full product description will be developed, including all relevant information on food safety i.e. composition, origin of ingredients, treatment, packaging, transport, instructions for use (2.3.1) and intended use, including suitability for vulnerable groups (2.4.1).
- Information sources (scientific literature, known hazards, relevant codes of practice, customer requirements) used to develop the HACCP Plan will be collected, maintained, documented and updated (2.3.2).
- A HACCP Plan is developed, using the 12 steps and 7 principles of HACCP (2.5 – 2.14):
 - construct and verify the process flow diagram.
 - list hazards, conduct an assessment of each hazard and document control measures.
 - determine the Critical Control Points (CCP) and the critical limits.
 - establish monitoring for each CCP and corrective actions.
 - establish verification procedures and record keeping.
 - review the HACCP Plan at least annually.

Generic HACCP plan used in the development of the system

- Not specifically defined in this standard.

Approved suppliers

- A documented supplier approval and monitoring procedure will be developed and implemented. The program will be based on a combination of supplier audits, third-party audits or certifications, and supplier questionnaires (3.5.1.2). The procedure will detail how exceptions are handled (3.5.1.3).
- A documented procedure for approving and monitoring suppliers of services (pest control, laundering, transport, laboratory testing) will be developed and implemented (3.5.3.1). Contracts or formal agreements with these suppliers will exist, defining expectations and ensuring that food safety risks have been addressed (3.5.3.2).
- Methods for controlling outsourced processing are developed and implemented (3.5.4.1 – 3.5.4.4).
- Where third-party contractors are used for transporting finished product, the requirements in the Transport section (4.15) will be clearly defined in the contract and verified (4.15.7).
- Laboratories used to conduct analyses critical to product safety or legality will have recognised accreditation, or operate in accordance with ISO17025 (or similar) (5.5.2.3).

- Procedures must be in place to ensure the reliability of lab results (other than those critical to product safety or quality) (5.5.2.4).
- Laundries providing protective clothing for high-care or high-risk areas are audited directly or by a third-party, or will have relevant certification (7.4.4).

Control of inputs

- A risk assessment to identify potential risks to product safety, legality and quality from raw materials will be conducted (3.5.1.1).
- A documented procedure will be developed detailing how raw materials and packaging are accepted and released for use. A list of raw materials and acceptance criteria will be available (3.5.2.1). Records will be maintained (3.5.2.2).
- Specifications for raw materials and packaging will be developed, ensuring compliance with food safety and legislation, including defined limits for relevant attributes (chemical, microbiological, physical) (3.6.1).
- Further requirements for raw material, packaging and finished products and any other product or service that may affect the food safety of the finished product are outlined (3.6.2-3.6.5).
- Purchase of ingredients and packaging which use staples or other foreign-body hazards will be avoided (4.9.2.2).
- Suppliers of food-grade packaging will be made aware of characteristics of the food that may affect packaging suitability. Certificates of conformity or other evidence is kept to show packaging meets food safety legislation and is suitable for use (5.4.1).
- Purchased liners that contact product will be appropriately coloured and resistant to tearing (5.4.2).

Good Manufacturing Practices (GMP)

- Document inspections will occur at least monthly to ensure that the factory environment and equipment is maintained in suitable condition, assess cleaning and housekeeping and ensure buildings are in appropriate condition (3.4.4).
- Waste disposal controls are required for:
 - 'categorised' (controlled) wastes (4.12.1).
 - food products intended to be supplied for animal feed (4.12.2).
 - external waste collection containers and rooms. These must be managed to minimise risk (clearly identified, easy to use and clean, well-maintained, emptied at appropriate frequency) (4.12.3).
 - unsafe or branded products transferred to a third-party for disposal / destruction (4.12.4).
- Allergen management controls must be in place including:
 - an assessment of raw materials will be conducted to determine likelihood of contamination by allergens (5.2.1).
 - all allergy-causing materials handled on site will be identified and listed (5.2.2).
 - an assessment to identify routes of contamination will be conducted and documented, along with procedures for handling raw materials and finished products to ensure cross-contamination is avoided (5.2.3).
 - documented procedures to ensure effective management of allergenic material to prevent cross-contamination will be developed (5.2.4).
 - controls for rework are in place (5.2.5).
 - if cross-contamination cannot be avoided, appropriate allergen warnings will be included on the label (5.2.6).
 - claims regarding suitability of food for allergy sufferers will be validated (5.2.7).
 - cleaning processes will be designed to remove or reduce to acceptable levels potential cross-contamination. These methods will be validated and cleaning equipment will be identified (5.2.8)

- all relevant employees will receive general allergen awareness training (5.2.9)
- documented checks for labels in place (5.2.10)

Good Agricultural Practices (GAP)

- Not addressed (not an on-farm standard).

Control of storage

- Documented procedures to maintain product safety and quality during storage will be implemented and understood by relevant staff. These may include managing chilled and frozen temperatures, segregation to avoid cross-contamination, storing materials off floor and away from walls, specific handling or stacking requirements (4.14.1).
- Where temperature control is required, the storage area will be capable of maintaining product temperature within specification. Temperature recording equipment with alarms will be fitted or a system of manually checking at a defined frequency (4.14.2).
- Controlled atmosphere storage will be effectively controlled, with records kept (4.14.3).
- Items stored outside will be protected from contamination and deterioration (4.14.4).
- Adequate stock rotation processes will be in place (4.14.5).

Control of processing / preparation / handling

- Documented procedures for managing non-conforming products are developed, including requirements for identification and segregation of non-conforming products, defined responsibilities, records of decision and records of destruction or rework (3.8.1).
- A plan of the site will identify areas where product is at different levels of risk from contamination i.e. enclosed areas, low and high risk areas (4.3.1). The plan will define access points, location of facilities, routes to facilities from workplace, process flow, and waste removal routes. Designated walkways will be provided (4.3.2).
- Contractors and visitors are made aware of access procedures and requirements for the areas they are visiting. Maintenance or repair contractors will be supervised (4.3.3).
- In low-risk areas (4.3.4):
 - Process flow and procedures will be in place to minimise the risk of contamination of raw materials, packaging or products.
- In high-care areas (4.3.5):
 - Physical segregation of this area.
 - If no physical segregation, processes will be in place to protect products from contamination.
 - Plan of drains, showing direction of flow (4.4.4).
 - Personnel will enter via a designated changing facility to prevent contamination of clothing (4.8.4). This area will have the following:
 - instructions for how to change into dedicated protective clothing (will be visually distinctive and not worn outside).
 - dedicated footwear (shoe covers for visitors).
 - segregation for outdoor and protective footwear or effective boot wash.
 - hand washing and disinfection.
 - Dedicated cleaning equipment (4.11.5).
- In high-risk areas (4.3.6):
 - Physical segregation of this area.
 - Practices in place to minimise risk of contamination.
 - Plan of drains, showing direction of flow (4.4.4).
 - Sufficient changes of filtered air (4.4.13).
 - Personnel will enter via a designated changing facility to prevent contamination of clothing (4.8.5). This area will have following:

- instructions for how to change into dedicated protective clothing (will be visually distinctive and not worn outside).
 - dedicated footwear (shoe covers for visitors).
 - segregation for outdoor and protective footwear.
 - hand washing and disinfection.
- Dedicated cleaning equipment (4.11.5).
- Sufficient working space to enable operations to occur in safe, hygienic conditions will be provided (4.3.7).
- Temporary structures will be designed and located to ensure the safety and quality of products and avoid pest harbourage (4.3.8).
- Water used as a raw material, in the preparation of product or for cleaning will be in sufficient quantity, potable at the point of use, or pose no risk of contamination (according to applicable legislation). Microbiological and chemical testing will be conducted at least annually, with the frequency and sampling point based on risk (4.5.1).
- Air, gas and steam used in contact with or as an ingredient in products will be monitored. Compressed air used directly in contact with product will be filtered (4.5.4).
- No staples or paper clips in production areas (4.9.2.2).
- Grass or other brittle materials will be excluded or protected against breakage in areas with open products or risk of contamination (4.9.3.1). Procedures will be in place for handling glass and other brittle materials. These will include a list of items, recorded check on items, details of cleaning and replacement of items (4.9.3.2). Procedures detailing actions to be taken in case of breakage will be documented and implemented (4.9.3.3).
- Controls for dealing with products packed into glass or other brittle materials are required (4.9.3.4.1 – 4.9.3.4.3).
- Wood will not be allowed and used in open product areas (except where it is a process requirement). If it cannot be avoided, the condition of wood will be continually monitored (4.9.4.1).
- Controls for foreign body detection and removal equipment must be in place (4.10.1.1 – 4.10.1.4) including:
 - documented assessment for the potential use of equipment to detect or remove foreign matter contamination.
 - type, location and sensitivity of detection devices.
 - frequency of testing of detection and removal equipment.
 - investigation into detections or removal of foreign matter contamination.
- Controls on types of detection / removal equipment (filters, sieves, metal detectors and x-ray equipment, magnets, optical sorting equipment) are defined (4.10.2 – 4.10.6).
- Where metal detection is used, a sample from each batch of metal detectable plasters will be tested through the equipment, with a record kept (7.2.4).
- A scheduled programme of testing (including products and the processing environment) will be in place, covering microbiological, physical, chemical and organoleptic testing (5.5.1.1).
- Test and inspection records will be kept and reviewed to identify trends (5.5.1.2).
- Shelf-life assessment will be completed, this will be based on risk and include microbiological and sensory analysis. Records will be kept and results will be used to validate shelf-life (5.5.1.3).
- Pathogen testing will be contracted to an external lab. If conducted internally, the lab will be segregated from the manufacturing site and will have procedures to prevent contamination (5.5.2.1).
- Controls must be in place for on-site laboratories covering location, construction and design (5.5.2.2).
- Where products require positive release, procedures will be in place to ensure release doesn't occur until all criteria are met and release authorised (5.6.1).

- Documented process specifications and work instructions will be available for key processes to ensure product safety, legality and quality. These will include recipes, mixing instructions, cooking and cooling times and temperatures, shelf life marking etc. (6.1.1).
- Process monitoring (of time, temperature, pressures, chemical properties) will be implemented, controlled and recorded to ensure product is within the specifications (6.1.2).
- If in-line monitoring is used, suitable failure alert systems will be in place (6.1.3).
- Where variation in conditions within processing equipment may occur, the product characteristics will be validated (6.1.4).
- In case of equipment failure or deviation from process, procedures will be in place to check food safety and quality of the product (6.1.5).
- Checks of the production line will be conducted to ensure lines are suitable before commencing production (clean, previous products removed etc.) (6.1.6).
- Documented procedures will be in place to ensure products are packed into the correct packaging and correct labels are used. Checks will occur at the start of and during packing, when packaging changes and when batches of packaging changes (6.1.7).

Transport

- Documented procedures to maintain product safety and quality during loading and transport will be implemented. These may include managing temperatures of loading dock areas, use of covered bays, securing loads to prevent movement and inspection of loads (4.15.1).
- Traceability will be maintained during transport, including records of dispatch and receipt of materials (4.15.2).
- Vehicles and containers used for transport will be checked for suitability, cleanliness and absence of strong odours, maintained to prevent damage to product, and equipped to maintain temperatures (4.15.3).
- Vehicles will be able to maintain required temperatures with minimum and maximum loads. Data loggers or a record of manually checking temperatures will be in place (4.15.4).
- Maintenance and cleaning procedures and records for transport vehicles will be kept (4.15.5).
- Documented procedures for transporting products will be developed, and include restrictions on mixed loads (where required), requirements for product security during transport and instructions on actions to take in case of breakdown (4.15.6).

Calibration

- Measuring equipment used to monitor CCP's, product safety and legality will be identified and controlled (6.3.1).
- All identified devices will be checked, and where necessary, adjusted at a predetermined frequency to a defined method. Results will be documented (6.3.2).
- Reference measuring equipment will be calibrated and traced to a recognised national or international standard, with records maintained (6.3.3).
- If devices are found to be operating outside specified limits, actions will be taken and recorded. If product is affected, action will be taken to ensure at-risk product is not offered for sale (6.3.4).

Premises construction/maintenance

- Local activities and the site environment will be considered to determine if they will have an adverse effect on product integrity. Measures to prevent contamination will be implemented and reviewed when changes occur (4.1.1).

- External areas will be maintained in good order. Trees and gardens will be well maintained. External traffic routes (under the businesses control) will be adequately surfaced and maintained (4.1.2).
- Building fabric will be maintained (4.1.3).
- Requirements for premises construction include (4.4.1 – 4.4.13):
 - Walls constructed, finished and maintained to prevent accumulation of dirt, mould growth and to facilitate cleaning.
 - Floors hard wearing, able to withstand cleaning materials and methods, impervious and maintained in good condition.
 - Drainage appropriately situated, designed and maintained. Ideally process water is piped directly to drains or floors with adequate falls to cope with the flow of water to drain.
 - Ceilings and overheads constructed, finished and maintained. Suspended ceilings or roof void to have access that allows for checking for pest activity.
 - Windows screened to prevent ingress of pests (if risk of contamination) and protected against breakage.
 - Doors maintained in good condition, with external doors close fitting or adequately proofed. External doors to product areas remain closed during production, except in emergencies (precautions in place to prevent pest ingress).
 - Lighting suitable and sufficient. Bulbs and strip lights adequately protected or a plan in place to monitor for breakage.
 - Ventilation and extraction provided to prevent condensation of excessive dust.
- Plan of water distribution system will be available (4.5.2).
- A documented planned maintenance schedule will be developed and implemented, covering all plant and processing equipment. Maintenance requirements will be defined when commissioning new equipment (4.7.1).
- If there is a risk of product contamination by foreign matter from equipment damage, the equipment will be inspected with records kept (4.7.2).
- Maintenance procedures and processes in place, including control for temporary repairs, cleaning after repairs or maintenance occurs, food grade oils and lubricants, and clean and tidy workshops (4.7.3 – 4.7.6).

Control of plant and equipment

- A documented assessment of site security and risks to the product from intentional damage or contamination. Identified security arrangements will be implemented and reviewed annually (4.2.1).
- Only authorised personnel will have access to production and storage areas. Access by others will be controlled, with a visitor reporting system in place (4.2.2).
- Equipment will be constructed out of appropriate materials, ensuring it can be cleaned (4.6.1). Equipment in direct contact with food will be suitable for food contact and meet legal requirements where applicable (4.6.2).
- Policy in place for use of sharp implements (knives, scissors, needles etc.), including a record of inspection for damage and investigation of lost items (4.9.2.1).

Cleaning schedule / sanitisation

- Documented cleaning procedures in place and maintained for building, plant and all equipment. Procedures to include responsibilities, item / area to be cleaned, frequency of cleaning, method of cleaning, chemicals and concentrations, materials to be used, records and verification (4.11.1).
- Limits of acceptable and unacceptable cleaning performance are defined based on potential hazards. Levels may be defined by visual appearance, microbiological testing, and chemical testing. Procedures and frequency are validated and records kept (4.11.2).
- Resources for undertaking cleaning are available (4.11.3).

- Cleanliness of equipment will be checked before being used again (4.11.4).
- Cleaning equipment will be fit for purpose, identified (colour coded), cleaned and stored in a hygiene manner (4.11.5).
- Cleaning-in-place controls and requirements defined (4.11.6.1 – 4.11.6.3).

Pest control

- Either a pest control contractor (with service contract), or appropriately trained staff, will regularly inspect and treat the site to deter and eradicate infestation. Frequency to be determined by risk assessment (4.13.1).
- If trained staff are used (rather than a contractor), staff will be trained and competent to be able to select chemicals and proofing methods, resources will be available to ensure infestations are controlled, have ready access to technical knowledge, legislation governing use is understood, and dedicated storage facilities provided for chemicals (4.13.2).
- Documentation and records will be kept (4.13.3).
- Other controls include:
 - appropriate bait stations available (robust, tamper resistant, secured in place and appropriately located) (4.13.4).
 - fly killing devices and pheromone traps are correctly sited and operational (4.13.5).
 - immediate action will be taken if pest activity is detected, with potentially affected products subject to non-conforming product procedure (4.13.6).
 - records of monitoring, proofing, actions taken will be kept (4.13.7).
 - an in-depth, pest control survey will be conducted at least quarterly by an expert to ensure that procedures are effective (4.13.8).
 - results of inspections will be reviewed and trends identified at least annually (4.3.19).

Product recall

- Recall procedures are in place and must include the ability to manage 'incidents' (disruption to key services, fire, flood, natural disaster, malicious contamination or sabotage) and maintain business continuity (3.11.1).
- The procedure will include:
 - key personnel and responsibilities.
 - guidelines for recall and withdrawal and records to be maintained.
 - key contacts / government agencies list.
 - communication plan.
 - external agencies contacts to provide support.
 - plan for handling logistics of traceability, recovery, disposal and reconciliation.
- Recall procedures will be tested at least annually to ensure their effective operation. Records will be retained (3.11.3).
- Certification Body will be informed within 3 days if a recall is to occur (3.11.4).

Product identification and traceability

- Identification of products (raw material, packaging, semi-processed products, part-used materials, finished products) will be adequate to ensure traceability (3.9.1).
- A test of traceability (including quantity check / mass balance) throughout the process will be completed at least annually. Full traceability should be achievable within 4 hours (3.9.2).
- Where rework occurs, traceability will be maintained (3.9.3).
- Controls and system of traceability in place for claims made about provenance, assured status and claims of identity preserved materials (5.3.1 – 5.3.3).

Personnel hygiene

- Designated facilities required include changing facilities with direct access to packing facility (or procedures to reduce risk of contamination if recourse to external area is required) (4.8.1), sufficiently sized staff storage areas for personal items (4.8.2), space for outdoor clothing to be stored separately from workwear (4.8.3).
- Hand washing facilities at access to, and at other areas within, production areas. These must be equipped with water at a suitable temperature, liquid soap, single use towels or air dryers, hands-free operated water taps, hand washing signs (4.8.6).
- Hand cleaning will be performed on entry to production areas at an appropriate frequency (7.2.2).
- Segregated toilets, not opening directly onto production area, will be provided and equipped with basins with soap and water at suitable temperature, hand drying facilities, and hand washing signs (4.8.7).
- Designated controlled smoking areas and arrangements to deal with smokers waste are provided, with areas isolated from production areas (smoke cannot reach the product) (4.8.8).
- Food brought in by workers will be stored in a clean and hygienic manner, with no food taken into storage, processing or production areas (4.8.9). Catering facilities will be controlled to prevent contamination of product (4.8.10).
- Requirements for personal hygiene will be documented, communicated to all personnel and checked routinely (7.2.1). These requirements include:
 - watches not worn.
 - jewellery not worn (with the exception of plain wedding ring or wristband).
 - rings and studs in exposed parts of the body (includes ears, noses, tongues and eyebrows) not allowed.
 - no false fingernails permitted and fingernails to be kept short, clean and unvarnished.
 - excessive perfume and aftershave not worn.
- Cuts and grazes on exposed skin will be covered by appropriately coloured plaster (preferably blue) with a metal detectable strip. These will be company issued and monitored (7.2.3).
- Processes and instructions for staff will be documented to ensure controls over personal medicines (7.2.5).
- Requirements covering medical screening of employees are in place, including:
 - Procedures requiring employees to notify the employer of relevant infection, disease or other relevant condition (7.3.1).
 - Where there may be a risk to product safety, visitors and contractors will complete a health questionnaire to confirm their health status (7.3.2).
 - Documented procedures for employees, contractors and visitors relating to action to be taken if they are suffering from, or have been in contact with, an infectious disease (7.3.3).
- Controls covering protective clothing to be worn by personnel, visitors and contractors are in place, covering:
 - Documented rules for protective clothing communicated to relevant personnel (7.4.1).
 - Availability of sufficient, suitable clothing and hair and beard coverings (7.4.2).
 - Laundering processes and controls (7.4.3).
 - Gloves to be replaced regularly, suitable for food use or disposable type, of a distinctive colour (7.4.5).
 - Items of protective clothing not suitable for laundering must be cleaned and sanitised regularly (7.4.6).

Training

- Senior management will ensure all employees are aware of their responsibilities, have access to documented work instructions (where available) and demonstrate that work is carried out in accordance with the instruction (1.2.2).
- Procedures and work instructions will be legible, unambiguous, in appropriate languages and sufficiently detailed. Photos and pictorial instructions may be used if there are issues of literacy or language (3.1.3).
- All relevant personnel will be trained prior to commencing work and adequately supervised (7.1.1). Relevant training will be given to those involved in activities relating to Critical Control Points (CCPs) (7.1.2).
- Documented programmes covering training needs of relevant personnel will be developed (7.1.3).
- Records of all training will be kept (7.1.4).
- Competency of staff will be reviewed routinely and relevant training provided (7.1.5).

Control of use of chemicals

- Processes are in place to prevent contamination from chemicals (4.9.1.1), including:
 - approved list of chemicals.
 - MSDS and specifications available.
 - confirmation of suitability of use.
 - avoidance of strongly scented products.
 - labelling / identification of containers of chemicals.
 - segregated and secure storage.
 - use by trained personnel.
- Procedures are in place if strongly scented or taint forming materials have to be used (4.9.1.2).

Coles Supplier Requirements – Food (CSR-FV3 May 2011)

General information

Originally released in March 2009, Coles developed the “Coles Supplier Requirements”, as they believed that external food safety standards were too generic to address some areas specific to Coles. The Coles Supplier Requirements are audited at the same time as the external standard that the supplier is certified to.

“Coles Supplier Requirements – Food” is developed for suppliers of Coles Brands Suppliers. A Coles Brands Supplier is defined as *“any supplier who provides a product which is manufactured and packed with a brand owned by Coles, including but not limited to, SmartBuy, Coles Finest, Coles Butcher, and Coles Market Place. This also includes supply of bulk products which are sold loose or unbranded in a display case or open carton, bulk produce which is packed into Returnable Plastic Crates, bulk product which is packaged at store...”*

Coles Brands Suppliers will be audited against these additional elements as well as being certified against the relevant external standard (BRC-Food, SQF2000L3, SQF1000L3, Freshcare or GlobalG.A.P IFA-V4 Option 1).

Coles Supplier Requirements has 13 main system requirements:

- Use of sub-contracted or indirect suppliers.
- Product specifications, retention sampling.
- Shelf life validation and verification.
- Finished product assessment against specification.
- Weights and measures.
- Sale of Coles branded product.
- External laboratories.
- HACCP training.
- Metal detectors.
- Disposable clothing / plastic liners.
- Soil additives.
- Animal welfare.

Applicability across the supply chain

This standard does not apply to indirect suppliers to Coles. Indirect suppliers are to be managed by the direct Coles supplier, and be certified by a JAS-ANZ (or equivalent) accredited Certification Body to a HACCP based food safety program for example, BRC-Food, SQF2000L3, SQF1000L3, Freshcare or Global G.A.P. IFA-V4 Option 1, NZ G.A.P. Suppliers of value-added fruit and leafy salads / mixes shall ensure that all their growers are certified to SQF 1000 or Freshcare.

Uptake of the scheme within the sector

According to a representative of Coles, they are not permitted to give details on the number of suppliers certified to the Coles Requirements, but it is “in excess of 600 sites”.

Auditing

Note that Coles Supplier Requirements are not a standalone certification. Coles Supplier Requirements are requirements which Coles suppliers are required to be certified against in conjunction with certain 3rd party audited standards approved by Coles.

Certification Body requirements

Certification to Coles Supplier Requirements is undertaken by Coles approved Certification Bodies and Coles approved Food Safety Auditors.

Auditor requirements

As the Coles Supplier Requirements are audited in conjunction with one of the other 3rd party certified standards (BRC-Food, SQF2000L3, SQF1000L3, Freshcare or Global G.A.P. IFA-V4 Option 1), auditors must meet the requirements of the relevant standard. The auditor must also be an approved Coles Food Safety Auditor.

Audit frequency

Audits are to occur at least once per year.

Audit timing

When manufacturing is being conducted and “ideally when Coles products are being produced”¹⁴

Manner of dealing with corrective actions

Non-conformances against both the external standard and Coles Supplier Requirements must be closed out in order to be granted Certification under the Coles Brand Supplier Approval Program.

In addition to the requirements of the associated external standard, Coles requires the following action in relation to any Non-Conformance against that standard:

- o Critical non-conformance: Auditor to advise Coles while still on-site and Coles to determine action to be taken.
- o Major non-conformance: To be rectified within 14 days.
- o Minor non-conformance: To be rectified within 30 days.

A non-conformance against any element of the Coles Supplier Requirements constitutes a major non-conformance.

How microbiological hazards are addressed

Fresh produce chemical and microbiological specifications as at 21/02/2011:

<i>Escherichia coli</i>	Less than 10 colony forming units (CFU) per gram	All fruit and vegetable products to comply; appropriate testing and management of inputs (e.g. water) are also required in support of this target.
<i>Salmonella</i>	Not detected per 25 grams	All fruit and vegetable products to comply; appropriate testing and management of inputs (e.g. water) are required in support of this target.
<i>Listeria monocytogenes</i>	Not Detected in 25 grams	Herbs and washed leafy products.

¹⁴ Coles Supplier Requirements – Food, May 2011.

- Additional requirements may apply to specific crops as communicated by the Coles Product Technologist.
- Testing shall be undertaken by a NATA (or international equivalent) accredited laboratory.

Regulatory requirements

- Compliance with Trade Weights and Measures legislation is maintained.
- Finished product label verification is to be conducted at least annually and whenever product changes occur to ensure they meet regulatory requirements.
- All other regulatory requirements are addressed in the external standard held by the producer / packer.
- Any products sold by the supplier through discount or staff outlets, or given freely to staff, shall comply with relevant Federal and State legislation.

HACCP plan

- Not specifically addressed.

Generic HACCP plan used in the development of the system

- Not specifically addressed.

Approved suppliers

- Where produce suppliers source product externally, the source must be made an Approved Supplier and provide evidence of second or third party certification by a JAS-ANZ (or equivalent) accredited Certification Body to a HACCP based food safety program.

Control of inputs

- Soil additives and / or fertilisers made from composted or un-composted human effluent or biosolids are not permitted to be used.

Good Manufacturing Practices (GMP)

- Disposable gloves and protective clothing items must be in a contrasting colour to the ingredients and finished product/s when used.
- Ideally disposable gloves will be latex free.
- Plastic liner-bags must be in contrasting colour to the product/s.

Good Agricultural Practices (GAP)

- Not specifically addressed.

Control of storage

- Not specifically addressed.

Control of processing / preparation / handling

- Where metal detectors are used, unless written advice from the manufacturer states otherwise, test pieces for metal detectors shall be placed inside the centre of the product (not on their own) when passed through the detector.

Transport

- Not specifically addressed.

Calibration

- Scales and check-weighers used for finished product weight checks shall be verified for accuracy with a test weight prior to the commencement of each day's packing with records kept.
- Test weights shall be certified.

Premises construction / maintenance

- Not specifically addressed.

Control of plant and equipment

- Not specifically addressed.

Cleaning schedule / sanitisation

- Not specifically addressed.

Pest control

- Not specifically addressed.

Product recall

- Not specifically addressed.

Product identification and traceability

- Not specifically addressed.

Personnel hygiene

- Not specifically addressed.

Training

- There must be a designated HACCP team leader within the business, and this person shall undertake formal HACCP training (of at least 16 hours in duration) delivered by an RTO / TPECS training body. After this initial training, the designated HACCP team leader will undertake refresher training at least every 3 years. This refresher training may be conducted by internally or by an external training provider, as long as it is conducted by an RTO / TPECS certified training body, or a trainer holding Cert IV Training and Development (or equivalent), and evidence of training is provided.
- Additional key members of the HACCP team are strongly encouraged to undergo HACCP training.

Control of use of chemicals

- Not specifically addressed.

Freshcare Food Safety and Quality – 3rd Edition (July 2009)

General information

The Freshcare Code of Practice - Food Safety and Quality is an industry owned standard, originally launched in 2000, which describes the good agricultural practices required on-farm to provide assurance that fresh produce is safe to eat and meets customer requirements.

The Code identifies good agricultural practices required to:

- identify and assess the risk of food safety hazards occurring during land preparation, growing, harvesting and packing of fresh produce.
- prevent or minimise the risk of food safety hazards occurring.
- prepare produce to customer specifications.
- identify, trace and withdraw / recall produce.
- manage staff and documentation.
- review compliance.

The Freshcare program offers benefits to both suppliers and customers. It provides verification that an industry recognised food safety and quality program is followed. Certification to the Freshcare program is achieved through independent 3rd party auditing to the Code of Practice by approved auditors.

A team of technical experts experienced in developing quality management systems for fresh produce, helped prepare the Freshcare Code of Practice - Food Safety and Quality.

An important criterion in developing the Code of Practice was the need for consistency with other on-farm certification programs. This consistency enables a single on-farm audit to cover more than one program, where applicable. Freshcare meets the requirements of a wide range of customer groups and forms the basis of many approved supplier programs.

Freshcare is the horticultural industry's own on-farm assurance program, developed by industry, for industry and operated as a not for profit organisation. Freshcare is owned by nineteen peak industry bodies. The owner organisations provide a vital link and conduit for communications between Freshcare and their individual members. Representatives from the owner organisations (both producer and non-producer groups) comprise the Board of Freshcare Ltd.

Freshcare has a number of documents – the Code of Practice, Compliance Criteria, Forms and Resource Manual. While the Code of Practice is the document that defines the elements that producers must comply with, some additional guidance is provided in the Compliance Criteria document.

The requirements of the Code of Practice, called elements, are grouped into two sections - Management and Food Safety and Quality.

Freshcare Code of Practice - Food Safety and Quality 3rd Edition has 16 main system requirements:

- Scope and commitment.
- Documentation.
- Training.
- Internal audit and corrective action.
- Customer requirements.

- Hazard analysis.
- Growing site.
- Chemicals.
- Fertilisers and soil additives.
- Water.
- Allergens.
- Facilities, equipment, containers, materials and vehicles.
- Animals and pests.
- People.
- Product identification, traceability and recall.
- Suppliers.

Applicability across the supply chain

Freshcare Code of Practice - Food Safety and Quality is only applicable to producers growing and packing fresh produce and fresh produce for processing.

Freshcare Code of Practice - Food Safety and Quality has been designed to cover all activities occurring on farm, including growing, storage, packing and dispatch of produce. It cannot be used for standalone packhouses or processors.

Uptake of the scheme within the sector

The number of current certifications was provided by Freshcare Limited. As at October 7 2011, there were 2,485 producers currently certified to Freshcare Food Safety and Quality. Of these 1,426 the majority are certified to the 3rd Edition, while some remain certified to the 2nd Edition. As of 1 September 2011, audits are no longer being completed to the 2nd Edition.

In addition, a further 312 producers are classified as “certification pending” (an audit has been completed, but corrective actions have not yet been closed).

There are also a further 1,035 producers that have completed training, but have not yet been audited.

Coles

In the updated Coles Standards Matrix¹⁵, Freshcare Food Safety and Quality 3rd Edition has been included as an acceptable standard for:

- Produce Growers.
- Produce Growers – with Packing Facility.

Woolworths

According to the WQA Standard¹⁶, if produce vendors (direct suppliers to Woolworths) purchase produce from other businesses, they must ensure the supplier of the produce is certified to a 3rd party audited quality assurance program. Freshcare Food Safety and Quality 3rd Edition is listed as an acceptable standard.

Auditing of each system

Certification Body requirements

Certification Bodies must be accredited by JAS-ANZ to ISO Guide 65 and ISO Guide 17021.

¹⁵ Coles Standards Matrix – Version 052011

¹⁶ Woolworths Quality Assurance Standard – Primary Production-Produce Version 7 January 2011

Freshcare Certification Bodies must demonstrate compliance with the following criteria:

- wide regional spread of auditors to deliver audit services to Freshcare members across Australia.
- ability to undertake audits against all Freshcare Codes of Practice (e.g. food safety and quality, environmental).
- ability to undertake combined audits (e.g. Freshcare + Coles, Freshcare + WQA, Freshcare + GlobalG.A.P).
- ability to provide timely, accurate reporting of audit outcomes through Freshcare Online.
- ability to effectively maintain a client database to ensure timely notification of upcoming audits.
- provide regular training to all auditors.
- appropriate insurance provision.

Auditor requirements

Freshcare auditors must:

- be certified as a food safety auditor by a Personnel Certification Body accredited to ISO 17024.
- have registered food safety qualifications related to intensive horticulture or equivalent.
- complete to the satisfaction of the Certification Body, a Freshcare auditor training course for each of the Freshcare Codes to be audited.
- maintain for the term of the engagement, a current chemical user certificate or equivalent.

Audit frequency

Annual.

Audit timing

During harvest and product handling (where applicable).

Manner of dealing with corrective actions

Initial certification

Certification will not proceed if there are any major non-conformances raised during the audit.

Re-certification

Major non-conformances must be addressed within 28 days or certification may be suspended or terminated. Minor non-conformances must be addressed before the next audit. Failure to do so results in them being regarded as major non-conformances.

How microbiological hazards are addressed on-farm

- Produce testing to occur when produce has potentially been contaminated by any of the following:
 - Growing site – sewage, septic, livestock, flooding.
 - Fertiliser – biosolids, human effluent, untreated fertilisers and soil additives of organic origin.
 - Preharvest water – toxic algae, microbial contaminated spray / irrigation water, flood water.
 - Postharvest water – to be potable when used on produce that has an edible skin and is generally eaten uncooked.
 - Condensate and defrost water from cooling systems.
 - Facilities, equipment, containers materials and vehicles.

- People – hand sanitiser to be used on produce that has an edible skin and is generally eaten uncooked, basic food hygiene.
- Animals and pest – domestic animals and wildlife.

Specified limits for water / fertiliser of organic origin¹⁷

- Produce test results to be E. coli <10g and Salmonella Not Detected / 25g or customer specification, whichever is the more stringent.
- Preharvest water – if testing is required, specified limits are either thermotolerant coliforms <1000 / 100ml or E. coli ≤ 126/100ml (dependant on results of risk assessment).
- Postharvest water must be potable (E. coli <1 / 100ml).
- Untreated fertilisers of organic origin and livestock not permitted on growing site within 90 or 180 days of intended harvest date (time limit dependant on results of risk assessment).
- Fertilisers of organic origin – considered treated when it achieves levels of E. coli <100 / g and Salmonella Not Detected / 25g.

Regulatory requirements

Regulatory requirements addressed within the Freshcare standard include:

- All packed produce sent to a customer is clearly identified and must include:
 - Business name and physical address.
 - Packing date and / or batch identification code.
 - Other trade descriptions required by customer or regulations.
- Use and disposal of agricultural chemicals and their containers according to state legislation.
- Each certified business must comply in all respects with:
 - its application for certification.
 - the Rules;
 - the Freshcare Code of Practice.
 - all laws and regulations relevant to the conduct of its activities, including holding all licences, permits, consents and approvals required for its activities.

HACCP plan

There is no specific requirement for a HACCP plan in the Freshcare Code of Practice; however a number of risk assessments must be and reviewed annually. The severity for each identified risk has been determined by Freshcare Ltd, and the producer needs to work through the decision guide, which helps them determine the likelihood of the risk occurring. A matrix is provided which then allows the producer to determine if the significance of the hazard is low or high.

If the significance is assessed as high, the producer must comply with a number of control measures, corrective actions and verification activities that have been specified by Freshcare Ltd.

The risk assessments focus on four areas:

- Persistent chemicals.
- Heavy metals.
- Fertilisers.
- Preharvest water.

¹⁷ A number of limits are specified in the Compliance Criteria document, rather than the Code of Practice.

Generic HACCP plan used in the development of the system

- In the development of the Freshcare Code of Practice - Food Safety and Quality 3rd edition, the Technical Steering Committee constructed a Master Hazard Analysis, which helped determine the Code's compliance criteria.
- This document is not provided to producers and was constructed only as a tool to aid the development of the Code.

Approved suppliers

- Materials and services that may present a food safety risk are identified.
- Specifications for these materials and services are documented and, as a minimum, meet the requirements stated.
- To ensure these specifications are met, materials and services that may present a food safety risk are either:
 - inspected / assessed against the specification and a record of inspection kept, or
 - purchased from an Approved Supplier.
- A business must confirm in writing, that it will only supply materials and services that comply with the specifications, before it is considered an Approved Supplier.
- A list of Approved Suppliers is kept and reviewed annually.
- Purchase records are kept for materials and services that may present a food safety risk.
- A Freshcare certified business must not represent produce for sale as Freshcare Certified unless the produce was grown by a business certified to Freshcare or an equivalent food safety program recognised by Freshcare.
- Produce grown by a Freshcare certified business must not be represented for sale as Freshcare Certified unless any subsequent packing is undertaken by a business certified to Freshcare or an equivalent food safety program recognised by Freshcare.

Control of inputs

- Raw material inputs are reviewed for known allergy-causing agents.
- Controls around types and applications of fertilisers and soil additives.
- Controls around quality and sources of preharvest water.
- Controls around quality and sources of postharvest water.

Good Manufacturing Practices (GMP)

- All packaging is checked for cleanliness, foreign objects and pest infestation. Where required packaging is cleaned, rejected or covered with a protective material.
- Wooden bins and pallets are checked for cleanliness, foreign objects, pest infestation and protruding nails and splinters.
- Containers used for storage of waste, chemicals or dangerous substances are clearly identified and not used for produce.
- Toilets and hand washing facilities are:
 - located to minimise risk to produce and maximise accessibility.
 - regularly maintained and serviced, and kept clean.
 - designed to ensure hygienic removal of waste and to minimise the risk of contaminating produce directly or indirectly through contamination of growing site or water sources.
 - equipped with running water, liquid soap, disposable paper towels and waste disposal facilities.
- Controls in place for glass, hard or brittle plastic, ceramic or similar materials.
- Items not necessary for production are removed from production areas to avoid foreign matter contamination.

Good Agricultural Practices (GAP)

- Treated fertilisers and soil additives of organic origin used within 90 days of harvest are sourced from approved suppliers.
- Fertilisers and soil additives of organic origin treated on-farm will be composted appropriately and records kept.
- Fertiliser and soil additive applications are avoided by neighbours and the grower when the risk of contaminating adjacent crops due to wind drift and / or run-off is high.
- Records of potential and actual wind drift or run-off incidents are kept.
- Livestock are not permitted on growing sites within 90 days of intended harvest date.

Control of storage

- Cleaning materials and equipment are stored safely to minimise the risk of contaminating produce.
- Equipment, containers and materials are stored in a manner that minimises contamination.
- Chemicals, grease, oil, fuel and farm machinery are segregated from packing and produce storage areas.
- Produce is not stored with goods that may cause contamination.
- Storage sites for fertilisers and soil additives are located, constructed, maintained and clearly identified.

Control of processing / preparation / handling

- Non-potable water outlets are clearly identified and not used for hand washing or cleaning.

Transport

- Produce is not transported under conditions, or with other goods that present a potential source of contamination.
- Transport vehicles are checked before use for cleanliness, foreign objects and pest infestation, and where necessary, cleaned to prevent contamination of produce.
- Transport refrigeration systems are checked to ensure they are operating at specified temperatures.

Calibration

- Monitoring and measuring equipment is identified, checked for operational efficiency and calibrated using a recognised method at a predetermined frequency and accuracy. A record is kept.
- Equipment used to apply fertilisers, soil additives, and agricultural chemicals are maintained and checked for effective operation before and during each use.

Premises construction / maintenance

- A documented plan of preventive maintenance is followed.
- Packing and storage of produce for retail sale is conducted in a designated clean area constructed and maintained to minimise the risk of contaminating produce.
- Facilities are reviewed at the start of the production season and at least weekly during operation, and a record is kept.
- Premises construction is to take into account the following, to minimise the risk of contaminating product:
 - growing, packing (including in-field packing) and storage facilities.
 - septic, waste disposal and drainage systems.

- location of hand washing facilities.
- mezzanine floors, walkways and stairs.
- lighting in growing, packing and storage areas.
- produce contact surfaces.
- cooling systems.
- Workshop equipment is not operated during production or near produce.

Control of plant and equipment

- Equipment, containers and materials are made of substances that are non-toxic and designed and constructed to enable regular maintenance.
- Hand held harvesting tools are company controlled and cleaned each day prior to use. Loss of tools is recorded.
- For produce that has an edible skin, and is generally eaten uncooked:
 - Produce containers used at harvest are handled to avoid contamination of produce from soil and physical contaminants.
 - A food grade liner is used when reused packaging cannot be effectively cleaned.

Cleaning schedule / sanitisation

- A documented plan is followed for cleaning of produce handling and storage areas, equipment, containers, materials and vehicles that come into contact with produce.
- Chemicals used for cleaning are approved for use in a food handling area and are used in accordance with label instructions.
- Cleaning must be effective and minimise the risk of contaminating produce.
- Equipment, containers and materials are made of substances that are non-toxic and designed and constructed to enable regular cleaning.
- Where required, bins and pallets are cleaned, rejected or covered with a protective material.
- Facilities are kept clean, and are subject to regular cleaning.

Pest control

- Domestic animals are excluded from areas where produce is grown, packed and stored.
- Where possible, wildlife is excluded from areas where produce is grown, packed and stored.
- Animal and pest presence must be minimised in areas where produce is packed and stored.
- Measures must be taken to discourage roosting of birds above growing facilities, packing and storage areas.
- Chemicals used for pest control are appropriate for use in a food handling area and are used according to label instructions.
- A documented plan is followed to minimise the presence of pests in and around packing and storage areas.
- Baits and traps used for pest control are located and contained to minimise the risk of contaminating produce, packaging containers, materials and equipment.
- Pest control measures are monitored to ensure they are effective and a record is kept.
- Chemicals used for pest control are not applied to edible plant parts.

Product recall

- In the event of a customer complaint or other notification indicating a potentially serious food safety issue, an investigation is carried out.
- If a recall is required, the level of recall is identified as Trade Level or Consumer Level.

- Where produce is supplied to the consumer level, a 'mock' recall is completed annually, using the A&NZ Product Recall / Withdrawal form. A record of this activity is kept.

Product identification and traceability

- The location of all growing sites is identified on a property map, or equivalent system.
- A record of all produce harvested is kept.
- Where harvested produce is sent to another business for packing or further processing, each delivery is clearly identified with supplier name and harvest or delivery date.
- All packed produce sent to a customer is clearly identified.

Personnel hygiene

- Verbal instructions on basic food safety are provided to workers and visitors, and reinforced with easily understandable written instructions, pictorial training guides or prominent signs.
- Food safety instructions include requirements for cleanliness, personal items and clothing, behaviour and health status.
- Toilets and hand washing facilities are readily available to enable compliance with personal hygiene requirements.
- Sanitiser is utilised when handling produce that has an edible skin and generally eaten uncooked

Training

- A management representative completes approved training for the Freshcare Code of Practice Food Safety and Quality – 3rd Edition.
- Training is provided for workers who complete tasks relevant to the Freshcare Code of Practice Food Safety and Quality.
- Workers are trained to identify, remove and not introduce allergy-causing agents.
- Person responsible for supervision of use, application, storage and handling of agricultural chemicals must have completed appropriate training (i.e. ChemCert or similar).
- In-house chemical handling training for those applying under supervision.
- All workers are to be trained in basic food hygiene.
- Training is provided in the relevant language or pictorially.
- Records of training to be kept.

Control of use of chemicals

- Records of all preharvest chemical applications are kept.
- Records of all postharvest chemical treatments are kept.
- Requirement to have an annual multi-residue chemical test on produce (one test per property, regardless of number of crops grown).
- Agricultural and postharvest chemicals must be applied in accordance with the chemical label.

GlobalG.A.P¹⁸ Integrated Farm Assurance – Version 4.0_Mar2011

General information

GlobalG.A.P is an integrated farm assurance system that defines Good Agricultural Practices (GAP) as agreed by European Retailers and associated organisations. GlobalG.A.P has five standards – Integrated Farm Assurance, Compound Feed Manufacturing, Animal Transport, Plant Propagation Material and Risk Assessment on Social Practice (GRASP).

For horticultural producers, the applicable standard is Integrated Farm Assurance. Within this standard there are a series of 'modules' covering many farm activities including livestock, aquaculture, and cropping.

For horticultural producers, three of these modules apply – “All Farm Base”, “Crops Base” and “Fruit and Vegetables”.

The GlobalG.A.P standard is primarily focussed on primary production activities; however a Produce Handling section is included in the standard. Producers can apply for an exclusion from the Produce Handling section of GlobalG.A.P if the product is no longer owned by the business when these activities take place. Standalone packhouses or processors cannot be certified to this standard

Being an integrated system, GlobalG.A.P goes beyond food safety to include environmental and worker health and safety issues. It is a prescriptive system rather than a principle based system.

There are a number of 'options' for certification. The most commonly used are Option 1 and Option 2. Option 1 means that the producer themselves are certified to GlobalG.A.P. Option 2 means that a producer group applies for the certificate – this group becomes the entity that is certified, with each individual producer's address listed on the certificate.

The specific requirements of GlobalG.A.P are called control points, and there are three types of control points; Major Musts, Minor Musts and Recommendations. To achieve certification a business must achieve 100% compliance for Major Musts and 95% compliance for Minor Musts. There is no minimum compliance percentage set for Recommendations.

In Australia, the majority of producers that hold certification to GlobalG.A.P do so in order to export their produce to overseas markets, particularly the EU and UK.

The requirements of GlobalG.A.P are detailed in:

- Control Points and Compliance Criteria All Farm Base Final Version 4.0_Mar2011.
- Control Points and Compliance Criteria Crops Base Final Version 4.0_Mar2011.
- Control Points and Compliance Criteria Fruit and Vegetables Final Version 4.0_Mar2011.

Applicability across the supply chain

GlobalG.A.P describes the Integrated Farm Assurance standard as a “*pre-farm gate or on-farm standard that covers the certification of the whole agricultural production process of the*

¹⁸ Previously EurepGAP – renamed GlobalG.A.P in 2008.

product from before the plant is in the ground (origin and propagation material control points) ... to non-processed product (no processing, manufacturing is covered)".¹⁹

GlobalG.A.P has developed a product that defines which products are suitable for certification to the GlobalG.A.P standard.

Under Sub-scope: Fruit and Vegetables:

"The range of products can be defined as: products originating from plants which are commonly designated as producing either "fruit", "vegetables", "edible roots", "bulbs", "tubers", "nuts", "spices" or "herbs", for fresh, cooked or processed consumption by humans. It does not include fruit or vegetables used solely for their aromatic purposes."²⁰

GlobalG.A.P cannot be achieved for 'wild crops' that are not cultivated. Peanuts are not applicable under the Fruit and Vegetable sub-scope – these are grouped with the 'combinable crops' i.e. oats, barley, sugar cane. GlobalG.A.P cannot be achieved by a standalone packhouse that does not produce any product on-farm.

Uptake of the scheme within the sector

According to the JAS-ANZ Register (www.jas-anz.com.au) there are 112 producers in Australia currently certified to GlobalG.A.P. This is backed up the GlobalG.A.P Annual Report (2010) which puts the figure at 108 producers. The majority of producers in Australia certified to this standard grow vegetables (65%), with over 90% of these growing onions for export markets. Of the remaining growers, produce certified includes stone fruit (primarily apples and pears) and cherries.

In addition to this standard being accepted by the major European, UK and American markets, both of Australia's major retailers recognise GlobalG.A.P as an acceptable standard for suppliers.

Coles

In the updated Coles Standards Matrix²¹, GlobalG.A.P Version 4 has been included as an acceptable standard for:

- Produce Growers.
- Produce Growers – with Packing Facility.

Woolworths

According to the WQA Standard²², if produce vendors (direct suppliers to Woolworths) purchase produce from other businesses, they must ensure the supplier of the produce is certified to a 3rd party audited quality assurance program. GlobalG.A.P is listed as an acceptable standard.

Auditing of each system

Certification Body requirements

The Certification Body (CB) must be accredited by JAS-ANZ or international equivalent to EN 45011 or ISO/IEC Guide 65 or ISO/IEC 17065 in the relevant GLOBALG.A.P sub-scope(s) and Approved Modified Checklists or in the relevant Full Benchmarked Scheme (see GLOBALG.A.P Benchmarking Regulations)

¹⁹ GlobalG.A.P Introduction – Integrated Farm Assurance Final Version 4.0_Mar2011

²⁰ GlobalG.A.P Product List V4.0-1_Aug11

²¹ Coles Standards Matrix – Version 052011

²² Woolworths Quality Assurance Standard – Primary Production-Produce Version 7 January 2011

The CB must employ an in-house trainer who has been trained and examined by GlobalG.A.P and must carry out witness assessments on each GlobalG.A.P auditor at least once every four years.

Auditor requirements

GlobalG.A.P auditor requirements are rigorous and include the following, depending on the scope of certification and type of GlobalG.A.P program (i.e. Option 1 or Option 2) being audited:

- Post high school qualifications (or equivalent) relating to the scope that they are approved to audit.
- HACCP training.
- Food hygiene training.
- Online training and examination regarding Global G.A.P requirements.
- Participation in a one day practical Global G.A.P auditing training session and examination.
- Industry recognised Lead Auditor training.

Audit frequency

Annual.

Audit timing

During harvest and product handling (where applicable).

Manner of dealing with corrective actions

Businesses must comply with 100% of Major Musts and 95% of Minor Musts to achieve and maintain certification. Non-conformances raised during an initial audit need to be closed within three months. Non-conformances raised during subsequent audits needs to be closed out within a timeframe determined by the auditor up to a maximum of 28 days.

How microbiological hazards are addressed on-farm

Microbiological hazards are addressed in a number of sections in the GlobalG.A.P standard. The following control points have been identified as pertaining to, or aimed at controlling, microbiological hazards on farm. The control points are:

Site

- Site risk assessment (AF.1.2.1) *Major Must*– the purpose of this assessment is to determine if the site that is to be used for growing the certified produce is appropriate. If risks are identified, a management plan must be put into place (AF1.2.2) *Minor Must*. The risk assessment must include:
 - legislation – compliance with local legislation that site can be used for production.
 - prior use of land – previous crops, industrial or military use, natural vegetation.
 - soil – erosion, drainage, exposure.
 - water – availability, authorisation to use, flooding.
 - other impacts to the surrounding areas from the site, and to the site from surrounding areas – dust, spray drift, availability of transport.

Hygiene

- Hygiene risk assessment (AF.3.2.1) – this risk assessment must consider risks to the product from poor hygiene practices. These risks may come from people, equipment, machinery etc. *Minor Must*
- Harvest hygiene risk assessment (FV.4.1.1) – this risk assessment is applicable to the harvesting and pre-farm gate transport operations. The assessment must cover physical,

chemical and microbiological contaminants and human transmissible diseases. *Major Must*

- Crop handling hygiene risk assessment (FV.5.1.1) – this assessment is applicable to the post-farm gate transport and crop handling operations, and is not applicable to those producers that have excluded Produce Handling. The assessment must cover physical, chemical and microbiological contaminants and human transmissible diseases. *Major Must*
- Documented hygiene instructions are in place for all workers, visually displayed (AF.3.2.2, FV.4.1.2, FV.5.1.2 and FV.5.2.5). *Minor and Major Must*
- All persons working on the farm (regardless of position) receive annual basic hygiene training, with evidence of training available (AF.3.2.2, FV.4.1.4 and FV.5.2.1). *Minor and Major Must*
- The hygiene procedures are implemented and workers can demonstrate competence during the inspection (AF.3.2.4, FV.4.1.3, FV.4.1.4, FV.5.1.3 and FV.5.2.2). *Minor and Major Must*
- Subcontractors and visitors are made aware of procedures for hygiene (AF.4.2). *Minor Must*
- Hand washing signs are visually displayed (FV.5.3.2). *Major Must*
- Clean hand washing facilities for harvest workers (FV.4.1.8) and packhouse (produce handling) personnel (FV.5.3.1). *Major Must*
- Toilets to be provided for harvest workers (FV.4.1.9) and packhouse personnel (FV.5.3.1). *Minor and Major Must*
- Workers wear outer garments that are clean, appropriate for the task and can protect the produce from contamination (FV.5.2.3). *Recommendation*
- Suitable changing facilities for workers are provided (FV.5.3.3). *Recommendation*

Fertiliser

- Organic fertiliser risk assessment (CB.5.5.2) – a number of risks must be considered as part of this assessment. Risks include type of organic fertiliser, method of composting, weed/seed content, heavy metal content, timing of application and placement of fertiliser in relation to the edible part of the produce. This assessment is only applicable to those producers that use organic fertilisers. A similar assessment for synthetic fertilisers is not required. *Minor Must*
- Records of application of fertilisers, both organic and inorganic, must be maintained (CB.5.3.1-CB.5.3.6). *Minor Must*
- Specific exclusion of use of human sewage sludge (CB.5.5.1). *Major Must*
- Organic fertiliser is incorporated into soil prior to planting or bud burst and not applied during growing season (FV.3.2.1). *Major Must*
- No evidence of excessive animal activity in the paddock that is a potential food safety issue (FV.3.3.1). *Minor Must*

Water

- Irrigation / fertigation water risk assessment (CB.6.3.2) – this assessment is designed to identify potential risks to the product from water used pre-harvest. The producer is instructed to consider microbiological, chemical and physical pollutants and the type of crop when conducting the assessment. This risk assessment will help producers determine if water analysis should be completed. The risk assessment should include:
 - identification of the water sources.
 - irrigation method(s).
 - timing of irrigation (during crop growth stage).
 - contact of irrigation water with the crop.
- Water used for chemical application risk assessment (FV.3.1.1) – this risk assessment must consider the risk to the product from water used to make agricultural chemicals mixes. It must include:
 - chemical.

- application timing – growth stage of the crop.
 - placement of application – i.e. on edible part, under tree.
- Testing quality of irrigation water (CB.6.3.3), frequency is dependent on the outcome of the risk assessment. Testing includes microbiological contaminants (CB.6.3.4) and must be done by a suitable laboratory (CB.6.3.5). Adverse results are acted upon before the next harvest cycle (CB.6.3.6). *Minor Must and Recommendation*
- Testing quality of postharvest water (FV.5.7.1), either declared suitable by competent authorities or analysed at point of entry into washing machinery (FV.5.8.5). Laboratory is suitable (FV.5.7.3). *Major Must and Recommendation*
- Untreated sewage water must not be used for irrigation / fertigation (CB.6.3.1). *Major Must*
- Ice or water used during harvest is potable or made from potable water (FV.4.1.12). *Major Must*
- Water used for final product washing is potable or declared suitable by competent authorities (FV.5.7.1). *Major Must*
- Water used for final produce washing that is re-circulated is filtered, and pH, concentration and exposure levels are monitored (FV.5.7.2). *Major Must*

Regulatory requirements

The GlobalG.A.P standard states that “*Legislation overrides GLOBALG.A.P where relevant legislation is more demanding. Where there is no legislation (or legislation is not so strict), GLOBALG.A.P provides a minimum acceptable level of compliance. Legal compliance of all applicable legislation per se is not a condition for certification. The audit carried out by the GLOBALG.A.P Certification Body is not replacing the responsibilities of public compliance agencies to enforce legislation.*”

Other regulatory requirements addressed within the GlobalG.A.P standard include:

- Compliance with registration of agricultural chemical (CB.8.1.1, CB.8.1.2, FV.5.8.3). *Minor and Major Must*
- Compliance with agricultural chemical labels (CB.8.1.3 and FV.5.8.1). *Major Must*
- Compliance with Maximum Residue Limits for country of production and country of destination (CB.8.6 and FV.5.8.2). *Major Must*
- Compliance with withholding periods (CB.8.4.1). *Major Must*
- Compliance with local regulations for disposal or destruction of agricultural chemical containers (CB.8.9.9). *Major Must*
- Compliance with local regulations for agricultural chemical storage (CB.8.7.1). *Major Must*

HACCP plan

There is no specific requirement for a HACCP plan; however a number of risk assessments must be completed. These risk assessments must be documented and reviewed annually.

All Farm Base

Producers are required to complete four risk assessments in order to comply with the All Farm Base module. These risk assessments include:

- Site risk assessment (AF.1.2.1) *Major Must*– the purpose of this assessment is to determine if the site that is to be used for growing the certified produce is appropriate. If risks are identified, a management plan must be put into place (AF1.2.2) *Minor Must*. The risk assessment must include:
 - legislation – compliance with local legislation that site can be used for production.
 - prior use of land – previous crops, industrial or military use, natural vegetation.
 - soil – erosion, drainage, exposure.

- water – availability, authorisation to use, flooding.
 - other impacts to the surrounding areas from the site, and to the site from surrounding areas – dust, spray drift, availability of transport.
- Hazards to human health and safety risk assessment (AF.3.1.1) – this assessment must consider the hazards to the health and safety of workers from on farm activities, machinery and equipment. Once the risk assessment is completed, procedures to address risks must be developed (AF.3.1.2). *Minor Must*
- Hygiene risk assessment (AF.3.2.1) – this risk assessment must consider risks to the product from poor hygiene practices. These risks may come from people, equipment, machinery etc. *Minor Must*
- Food Defense risk assessment (AF.9) – this element is new to Version 4 of the GlobalG.A.P standard, and is as a result of GlobalG.A.P broadening its market share in the USA. This risk assessment must consider risks to the food security of the produce, that is, the risk of intentional food adulteration from disgruntled employees, competitors or terrorist organisations. *Major Must*

Additional guidance is provided to producers (*Control Points and Compliance Criteria All Farm Base – Annex AF.1 GlobalG.A.P Guideline Risk Assessment*). This Annex provides generic guidance in completing a risk assessment, along with specific guidance for the site risk assessment.

Crops Base

Producers are required to complete up to three risk assessments in order to comply with the Crops Base module. These risk assessments include:

- Organic fertiliser risk assessment (CB.5.5.2) *Minor Must* – a number of risks must be considered as part of this assessment. Risks include type of organic fertiliser, method of composting, weed/seed content, heavy metal content, timing of application and placement of fertiliser in relation to the edible part of the produce. This assessment is only applicable to those producers that use organic fertilisers. A similar assessment for synthetic fertilisers is not required. *Minor Must*
- Irrigation / fertigation water risk assessment (CB.6.3.2) – this assessment is designed to identify potential risks to the product from water used pre-harvest. The producer is instructed to consider microbiological, chemical and physical pollutants and the type of crop when conducting the assessment. This risk assessment will help producers determine if water analysis should be completed. The risk assessment should include:
 - identification of the water sources.
 - irrigation method(s).
 - timing of irrigation (during crop growth stage).
 - contact of irrigation water with the crop.
- MRL risk assessment (CB.8.6.3) – this assessment evaluates the use of agricultural chemicals on site and the potential that the MRLs will be exceeded. This assessment will help producers determine if there is a need to conduct a residue test, the number of analyses, when and where to take the sample and what should be tested. *Major Must*

Further guidance on microbiological hazards can be found in *Crops Base Annex CB.1-GlobalG.A.P Guideline Microbiological Hazards*. Additional guidance for the MRL risk assessment is provided in *Crops Base Annex CB.6-GlobalG.A.P Guideline CB.8.6.4 MRL Exceedance Risk Assessment*. There is also a document titled *GlobalG.A.P Toolkit for Producers* that will guide producers through the process.

Fruit and Vegetables

Producers are required to complete up to three risk assessments in order to comply with the Fruit and Vegetables module. These risk assessments include:

- Water used for chemical application risk assessment (FV.3.1.1) *Major Must* – this risk assessment must consider the risk to the product from water used to make agricultural chemicals mixes. It must include:
 - chemical.
 - application timing – growth stage of the crop.
 - placement of application – i.e. on edible part, under tree.
- Harvest hygiene risk assessment (FV.4.1.1) – this risk assessment is applicable to the harvesting and pre-farm gate transport operations. The assessment must cover physical, chemical and microbiological contaminants and human transmissible diseases. *Major Must*
- Crop handling hygiene risk assessment (FV.5.1.1) – this assessment is applicable to the post-farm gate transport and crop handling operations, and is not applicable to those producers that have excluded Produce Handling. The assessment must cover physical, chemical and microbiological contaminants and human transmissible diseases. *Major Must*

Generic HACCP plan used in the development of the system

- The GlobalG.A.P Introduction document states that GlobalG.A.P is a “risk assessed HACCP based reference standard”.
- Verification activities are embedded in system requirements:
 - Internal auditing (AF.2.2). *Major Must*
 - Agricultural chemical residue testing (CB.8.6.4), frequency is dependent on the outcome of the risk assessment. Correct sampling procedures must be followed (CB.8.6.5) and completed by a suitable laboratory (CB.8.6.6). *Minor and Major Must*
 - Testing quality of irrigation water (CB.6.3.3), frequency is dependent on the outcome of the risk assessment. Testing includes microbiological contaminants (CB.6.3.4) and must be done by a suitable laboratory (CB.6.3.5). Adverse results are acted upon before the next harvest cycle (CB.6.3.6). *Minor Must and Recommendation*
 - Testing quality of postharvest water (FV.5.7.1), either declared suitable by competent authorities or analysed at point of entry into washing machinery (FV.5.8.5). Laboratory is suitable (FV.5.7.3). *Minor / Major Must and Recommendation*

Approved suppliers

- Specific requirements for suppliers of:
 - seed (CB.2.1.1). *Recommendation*
 - propagation material (CB.2.1.2). *Minor Must*
 - suppliers of technical advice for:
 - fertiliser applications (CB.5.2.1). *Minor Must*
 - integrated Pest Management implementation (CB.7.1). *Minor Must*
 - agricultural chemical applications (CB.8.2.1). *Major Must*
 - postharvest chemical applications (FV.5.8.4). *Major Must*
- When the producer makes use of subcontractors, the subcontractor (or the producer) must carry out an assessment relevant to the services provided on farm. Evidence of assessment must be available at audit, with GlobalG.A.P auditors allowed to verify the assessment through a physical inspection of the subcontractor (AF.4.1). *Minor Must*
- Common subcontractors used include agricultural chemical contractors, fertiliser spreading companies, transport companies.

Control of inputs

- Control of agricultural chemical treatments to propagation materials including seed, seedlings, rootstocks and plantlets (CB.2.2.1 and CB.2.2.2). *Minor Must*
- Plant health quality control systems in place for in-house nursery propagation (CB.2.1.3). *Minor Must*
- Control of Genetically Modified Organisms (CB.2.3.1-CB.2.3.5). *Major Must*
- Records of seed / planting rates and dates (CB.3.1). *Minor Must*
- Invoices of agricultural chemicals are kept (CB.8.1.4). *Minor Must*
- Written justification is required for the use of soil fumigants (FV.1.1).
- Records of application of fertilisers, both organic and inorganic, must be maintained (CB.5.3.1-CB.5.3.6). *Minor Must*
- Specific exclusion of use of human sewage sludge (CB.5.5.1). *Major Must*
- Untreated sewage water must not be used for irrigation / fertigation (CB.6.3.1). *Major Must*
- Records of application of substances other than fertiliser and agricultural chemicals (CB.8.11.1). *Minor Must*
- Written justification for use of substrates (FV.1.1.1) and compliance with pre-planting intervals (FV.1.1.2). *Minor Must*
- Control of substrates (FV 2.1 – FV 2.3). *Recommendation*
- Packaging materials are stored to protect them from contamination (FV.4.2.4 and FV.5.4.8). *Major and Minor Must*
- Agricultural and postharvest chemicals receive particular attention, for more detail see Control of use of agricultural and veterinary chemicals below.

Good Manufacturing Practices (GMP)

Good Manufacturing Practices start at harvest and go through to Produce Handling. Final packing at point of harvest is also included.

Issues not specifically included under other sections in this analysis include:

- Produce containers are used exclusively for produce storage (FV.4.1.10). *Major Must*
- Written procedures for handling breakage of glass and clear plastics in greenhouses (FV.4.1.11) and in produce handling, preparation and storage areas (FV.5.4.7). *Minor Must*
- Lights protected from breakage (FV.5.4.6). *Major Must*
- Packed produce (completed at point of harvest) is protected from contamination (FV.4.2.2). *Major Must*
- Non-produce waste generated in-field (i.e. packing materials) is removed from the field (FV.4.2.5). *Minor Must*
- Smoking, eating and chewing and drinking are done in designated areas, segregated from produce (FV.5.2.4). *Minor Must*
- Lockable storage facilities provided for workers (FV.5.3.4). *Recommendation*
- Cleaning chemicals, lubricants and other such products that may come into contact with produce are approved for use in the food industry (FV.5.4.3). *Minor Must*
- Animal access to packhouse restricted (FV.5.4.9). *Minor Must*

Good Agricultural Practices (GAP)

GlobalG.A.P is a collection of good agricultural practices. These practices may have environmental, product quality or occupational health and safety implications. Issues not specifically included under other sections in this analysis include:

- A range of additional worker health, safety and welfare issues are also considered (AF.3.4.1 – AF.3.4.5, AF.3.6.1 – AF.3.6.4, CB.8.8.3 – CB.8.8.5). *Minor and Major Must*

- Appropriate Personal Protective Equipment to be available for personnel using agricultural chemicals (AF.3.5.1). *Major Must*
- Identification and control of waste and pollutants (AF.5.1, AF.5.2).
- A range of environmental issues, including energy, are also considered (AF.6).
- Crop rotation for annual crops (CB.3.2). *Minor Must*
- Soil management in place including soil maps (CB.4.1), soil structure and compaction (CB.4.2), soil erosion (CB.4.3). *Minor Must and Recommendation*
- Fertilisers are applied according to specific needs of the crop and soil condition (CB.5.1.1). *Minor Must*
- Storage of fertilisers (CB.5.4.1 – CB.5.4.6 and CB.5.5.4). *Minor and Major Must*
- Inventory of fertilisers (CB.5.4.7) and agricultural chemicals (CB.8.7.17) stored on farm. *Minor Must*
- Nutrient contribution of organic fertilisers taken into account (CB.5.5.3). *Minor Must*
- Documentary evidence of nutrient content (CB.5.6.1) and chemical content of fertilisers (CB.5.6.2). *Minor Must and Recommendation*
- Predicting irrigation requirements (CB.6.1.1). *Recommendation*
- Irrigation / fertigation method (CB.6.2.1), water management plan (CB.6.2.2) and records of water usage maintained (CB.6.2.3). *Major Must and Recommendation*
- Supply of irrigation / fertigation water (CB.6.4.1 and CB.6.4.2). *Minor Must*
- Integrated Pest Management strategies (CB.7.2 – CB.7.4). *Major Must*
- Surplus application mix and tank washings are disposed of in a way that does not compromise food safety and the environment (CB.8.5.1). *Minor Must*
- Storage of agricultural chemicals (CB.8.7.2 – CB.8.7.16). *Minor Must*
- Procedures to deal with re-entry times are in place (CB.8.8.2). *Major Must*
- Handling and disposal of empty agricultural chemical containers and rinsate (CB.8.9.1 – CB.8.9.8). *Minor Must*
- Disposal of obsolete agricultural chemicals (CB.8.10.1). *Minor Must*
- Organic fertiliser is incorporated into soil prior to planting or bud burst and not applied during growing season (FV.3.2.1). *Major Must*
- No evidence of excessive animal activity in the paddock that is a potential food safety issue (FV.3.3.1). *Minor Must*
- Storage of biocides, waxes and postharvest chemicals (FV.5.8.6). *Major Must*

Control of storage

- Produce packed and handled directly in field, orchard or greenhouse is removed from field overnight. Food safety requirements are complied with if produce is stored on farm for short term basis (FV.4.2.1). *Major Must*
- Storage areas for produce packed in-field must be cleaned (FV.4.2.3). *Major Must*
- If packed produce is stored on farm, temperature and humidity controls must be maintained and documented where applicable (FV.4.2.6 and FV.5.5.1). *Major Must*
- Cleaning chemicals, lubricants and other such products are stored to prevent contamination of produce (FV.5.4.2). *Minor Must*
- Waste and reject produce stored in designated areas, routinely cleaned (FV.5.4.5). *Minor Must*

Control of processing / preparation / handling

- Fertilisers are not stored with harvested produce (CB.5.4.6). *Major Must*
- Ice or water used during harvest is potable or made from potable water (FV.4.1.12). *Major Must*
- Water used for final product washing is potable or declared suitable by competent authorities (FV.5.7.1). *Major Must*

- Water used for final produce washing that is re-circulated is filtered, and pH, concentration and exposure levels are monitored (FV.5.7.2). *Major Must*

Transport

- Farm vehicles used to transport harvested produce are cleaned and maintained (FV.4.1.7). *Major Must*
- Forklifts or other transport trolleys are clean, maintained and suitable to avoid contamination of produce by emissions (FV.5.4.4). *Recommendation*

Calibration

- Equipment sensitive to food safety and the environment is routinely verified and annually calibrated. Equipment includes fertiliser application equipment, chemical application equipment, irrigation systems, equipment used for weighing and measuring (CB.9.1). *Minor Must*
- Producer is involved in independent calibration-certification scheme, where available (CB.9.2). *Recommendation*
- Measuring and temperature control equipment used in produce handling must be verified (FV.5.5.2). *Minor Must*

Premises construction / maintenance

- Not specifically addressed.

Control of plant and equipment

- Not specifically addressed.

Cleaning schedule / sanitisation

- Protective clothing is cleaned after use (according to a documented schedule) and stored to prevent contamination (AF.3.5.2). *Major Must*
- Fertilisers are stored in a clean area – free from waste that does not constitute a breeding ground for rodents, where spillage is cleared away (CB.5.4.3). *Minor Must*
- Containers and tools used during harvest are cleaned and maintained (FV.4.1.6). *Major Must*
- Produce handling and storage facilities and equipment are cleaned according to a schedule and maintained to prevent contamination (FV.5.4.1). *Minor Must*

Pest control

- Procedures are in place to monitor and correct pest populations in packing and storage areas (FV.5.6.1). *Minor Must*
- Visual evidence to show that pest monitoring and correcting process are effective (FV.5.6.2). *Minor Must*
- Records maintained of monitoring and actions taken (FV.5.6.3). *Minor Must*

Product recall

- Documented procedure in place detailing how to initiate and manage recalls / withdrawal of certified products (AF.8.1). *Major Must*
- Mock recall to be conducted annually to test robustness of Recall procedures (AF.8.1). *Major Must*
- Action plan for dealing with an MRL breach is documented (CB.8.6.7). *Major Must*

Product identification and traceability

- Parallel production and Parallel Ownership now permitted. This is where a producer can produce certified and non-certified produce. If this occurs, the producer must have clear, documented robust systems of segregation, identification and traceability in place (AF.12). *Major Must*
- Traceability of product back to the farm and forward to the immediate customer is required (CB.1.1). *Major Must*
- Paddocks must be able to be visually identified (AF.1.1.1). *Minor Must*
- Recording system required for each paddock (AF1.1.2). *Major Must*

Personnel hygiene

- Documented hygiene instructions are in place for all workers, visually displayed (AF.3.2.2, FV.4.1.2, FV.5.1.2 and FV.5.2.5). *Minor and Major Must*
- All persons working on the farm (regardless of position) receive annual basic hygiene training, with evidence of training available (AF.3.2.2, FV.4.1.4 and FV.5.2.1). *Minor and Major Must*
- The hygiene procedures are implemented and workers can demonstrate competence during the inspection (AF.3.2.4, FV.4.1.3, FV.4.1.4, FV.5.1.3 and FV.5.2.2). *Minor and Major Must*
- Subcontractors and visitors are made aware of procedures for hygiene (AF.4.2). *Minor Must*
- Hand washing signs are visually displayed (FV.5.3.2). *Major Must*
- Clean hand washing facilities for harvest workers (FV.4.1.8) and packhouse (produce handling) personnel (FV.5.3.1). *Major Must*
- Toilets to be provided for harvest workers (FV.4.1.9) and packhouse personnel (FV.5.3.1). *Major Must*
- Workers wear outer garments that are clean, appropriate for the task and can protect the produce from contamination (FV.5.2.3). *Recommendation*
- Suitable changing facilities for workers are provided (FV.5.3.3). *Recommendation*

Training

- Workers receive health and safety training (AF.3.1.3). *Minor Must*
- A record of training activities and attendance is kept (AF.3.3.1). *Minor Must*
- All workers handling chemicals, disinfectants, postharvest biocides, waxes and chemicals, and other hazardous substances or operating complex or dangerous equipment have certificates of competence and / or details of qualifications (AF.3.3.2 and FV.5.8.4). *Major Must*

Control of use of chemicals

- Anti-resistance label recommendations are followed to maintain effectiveness of available agricultural chemicals (CB.7.5). *Minor Must*
- Agricultural and postharvest chemicals must be applied in accordance with the chemical label (CB.8.1.3 and FV?). This includes compliance with withholding periods (CB.8.4.1) and Maximum Residue Levels in the country where the crop is intended to be traded (CB.8.6.1-CB.8.6.2). *Major Must*
- Detailed records are kept for all agricultural chemical applications (CB.8.3.1-CB.8.3.10) and postharvest chemical applications (FV.5.8.7-FV.5.8.15). *Major Must*

Other

- Records are kept for at least two years unless otherwise specified by the standard or legislation (AF.2.1). *Minor Must*
- Corrective actions are taken if non-conformances are identified (AF.2.3). *Major Must*
- A complaint procedure is in place (AF.7.1). *Major Must*
- All transaction documents refer to the GlobalG.A.P status of the product (certified / not certified) (AF.10.1). *Major Must*
- An agreement is in place with producers and their direct clients to prevent misuse of the producers GlobalG.A.P Number (AF.10.2). *Minor Must*
- GlobalG.A.P word, trademark or logo is used as per GlobalG.A.P General Regulations, and not used on final product packaging (AF.11.1). *Major Must*
- All workers using chemicals are submitted voluntarily to health checks (CB.8.8.1). *Recommendation*

Salad GAP – Version 1.1 (September 2008)

General information

Salad GAP (**Salad Good Agricultural Practices**) was developed in 2008 by the Fresh Salad Producers' Forum (the Forum) and was supported by Horticulture Australia Limited (HAL).

Salad GAP is a set of Good Agricultural Practices that minimise the risk of food safety hazards during the growth and transport of field grown salad vegetables.

The Fresh Salad Producers Forum believed that by collaborating on projects such as Salad GAP, they would begin to develop a unified approach to essential pre-competitive issues, such as food safety.

Salad GAP was designed to enable salad growers to demonstrate best practice to a range of key stakeholders, including salad processors and retailers. The Forum believed that implementing the practices identified in these guidelines would protect the integrity of the salads' market, support Forum members' brands and ultimately have positive flow-on effects for the whole industry.

When the standard was developed, the target was for all businesses supplying salad vegetables to members of the Fresh Salad Producers' Forum to be certified by 1 April 2009.

Salad GAP was designed to add on to existing quality assurance programs, not replace them, and must be externally audited every 12 months.

Applicability across the supply chain

Salad GAP is applicable to Australian leafy green vegetables growers supplying into the value added salad market.

Leafy green vegetables are defined as: spinach, cabbage, raw watercress, lettuce and salad leaves (all varieties), fresh herbs (cilantro, basil, parsley), chicory.

It is not applicable for standalone packhouses.

Uptake of the scheme within the sector

According to Freshcare Limited (who are responsible for the ongoing management of Salad GAP certification) there are currently 51 producers certified to Salad GAP.

Auditing of each system

Salad GAP is intended as an additional certification to other standards. For these reasons, Certification Body requirements, auditor requirements, audit frequency and audit timing are not addressed in Salad GAP.

Manner of dealing with corrective actions

At least 100% of critical elements and 90% of major elements must be complied with in order to achieve certification. If any critical or major non-conformances are identified during an audit, growers have 28 days to rectify them and to bring the level of non-conformance to the required minimum, otherwise the audit is deemed invalid.

How microbiological hazards are addressed on-farm

Microbiological hazards are addressed in a number of sections in the Salad GAP standard. The following control points have been identified as pertaining to, or aimed at controlling, microbiological hazards on farm. The control points are:

Site

- If land has been used for livestock production in the last 12 months:
 - A 12 month exclusion period is required before commencing salad production.
 - If salad production is commenced within 24 months of removing livestock from the site:
 - relevant members of the Fresh Salad Producers' Forum are aware of the producers' intentions.
 - land is subject to multiple workings and irrigations.
 - soil is sampled according and found to have E. coli <10/g, Salmonella Not Detected / 25g.
 - at least one sample of product is collected and found to have E. coli <10/g, Salmonella Not Detected / 25g.
 - additional microbiological testing of product as directed by each Fresh Salad Producers' Forum member being supplied.

Hygiene

- All staff, including casuals, must be trained in Salad GAP food safety and personal hygiene requirements.
- Training records must be maintained and must specifically cover Salad GAP food safety and personal hygiene requirements.
- Toilets must be provided for all staff, including harvest workers.
- Clean hand washing facilities must be provided for all staff, including harvest workers.
- Wearing of gloves and jewellery is controlled. Personal items are not taken into paddock.
- Caps are worn or hair is tied back and contained.
- Workers wear clean, intact clothing, with no pockets above waist level. Footwear must be cleaned before starting work.
- Wounds must be covered with blue dressings and changed daily.
- Illnesses (such as symptoms of nausea, vomiting, diarrhoea) must be reported, and staff moved to non-produce handling roles.
- A policy addressing return to work following illness must be available and staff must be aware of its requirements.

Fertiliser

- A Certificate of Analysis showing non-synthetic fertiliser meets specification of E. coli <10/g, Salmonella Not Detected / 25g will be obtained:
 - annually for each type of non-synthetic fertiliser used from approved suppliers.
 - for each batch of non-synthetic fertiliser supplied by non-approved supplier.
- Raw manure or human biosolids must not be used.
- Non-synthetic fertilisers must not be used on land within 12 months of land being planted with salad crops.
- Produce will only be harvested upon instruction from relevant Fresh Salad Producer Forum member if non-synthetic fertilisers that do not have a Certificate of Analysis are used.
- Fertilisers must be incorporated or irrigated as soon as possible after application.
- Equipment used to apply non-synthetic fertilisers is thoroughly cleaned and sanitised after use or is dedicated for this purpose. Details of cleaning are documented.

Water

Pre-harvest water

- Specified limit = E. coli < 126 cfu / 100ml.
- Testing of pre-harvest water:
 - New sources tested monthly for 12 months, then annually at time of greatest risk (based on historical results).
 - Existing sources – tested quarterly for 12 months, then annually at time of greatest risk (based on historical results).
 - Additional tests undertaken in the event of extreme events or likely case of contamination of water supply.
- Water sources must be protected from potential contaminants such as run off from paddocks with livestock, run off from roadways, livestock operations etc. and from human interference.
- Where possible, livestock access to water sources is prohibited.
- Reclaimed or recycled water must meet the specifications for water used on commercial food crops consumed raw or unprocessed (defined in the Australian Guidelines for Water Recycling). Treatment objective is E. coli < 1/100ml. Water is tested each month during period of use, with E. coli detections reported to relevant members of the Fresh Salad Producers' Forum.

Postharvest water

- Specified limit for postharvest water = 1 E. coli/100mls.
- Water must be tested each month during period of use, with a sampling schedule developed and followed (collecting samples from a range of points over 12 month period).
- E. coli detections must be reported to relevant members of the Fresh Salad Producers' Forum.
- Water treatment specifications detailed:
 - Water sprayed onto product or product contact surfaces = greater than or equal to 1ppm Free Available Chlorine (FAC) and pH 6.5 – 7.5.
 - Water used for washing or immersion = 50-100ppm Free Available Chlorine (FAC) or ORP greater than or equal to 650mv and pH 6.5 – 7.5.
 - Information on dosage rates and other key criteria obtained for alternative treatment methods.
- Water treatment records must be kept, with efficacy verified at least monthly.

Regulatory requirements

- Compliance with registration of agricultural chemicals and postharvest treatments required.
- Compliance with withholding periods required.
- Compliance with Maximum Residue Limits required.

HACCP plan

There is no specific requirement for a HACCP plan; however a number of decision guides have been developed to assist producers determine the control measures and good agricultural practices they must implement. These measures and practices will be dependent on the activities undertaken on their property.

Decision Guides have been developed for:

- site.
- non-synthetic fertilisers.
- non-synthetic fertilisers (indirect contact).
- pre harvest water.

The control measures listed on each decision guide have been included under the relevant section below.

Generic HACCP plan used in the development of the system

A flow chart, detailing all steps in production and all inputs, was developed at the start of the development process by the steering committee. Microbiological, physical and chemical hazards were then considered at each step of the process and for each identified input.

A master hazard analysis was developed and documented to provide guidance on the prescriptive elements that made up the standard.

Approved suppliers

- Suppliers of goods or services that can affect food safety of product are made aware of their responsibilities and these responsibilities are documented.
- Suppliers that require control include, but are not limited to:
 - agricultural chemical suppliers.
 - agronomists / technical advisors.
 - bin, tub and crate suppliers.
 - cleaning chemical suppliers.
 - contract labour companies.
 - calibration companies.
 - laboratories.
 - non-synthetic fertiliser suppliers.
 - packaging suppliers.
 - pest control contractors.
 - portable toilet suppliers.
 - recycled / reclaimed water suppliers.
 - seedling suppliers.
 - spray contractors.
 - synthetic fertiliser suppliers.
 - transport companies.
 - water suppliers.
 - water treatment chemical suppliers.
- Specifications for suppliers of goods or services with the potential to affect food safety of product must be documented.
- Documentary evidence of compliance with these specifications must be obtained and kept.

Control of inputs

- A Certificate of Analysis showing non-synthetic fertiliser meets specification of E. coli <10/g, Salmonella Not Detected / 25g must be obtained:
 - annually for each type of non-synthetic fertiliser used from approved suppliers.
 - for each batch of non-synthetic fertiliser supplied by non-approved supplier.
- Chemicals are purchased from AgSafe accredited suppliers or similar.

Good Manufacturing Practices (GMP)

- Smoking, eating and chewing and drinking must only be done in designated areas, segregated from produce.
- The potential for contamination of harvested product must be controlled by:
 - ensuring bins, crates and tubs used are clean or a clean food grade liner is used.

- ensuring harvest containers used repeatedly during harvest are cleaned at least daily.
- not using broken or cracked bins, crates and tubs.
- minimising or eliminating contact between the ground and bottom of pallets, bins, crates and tubs.
- investigating means of protecting bottom of bins, crates and tubs (for example place bin, crate or tub being filled in another crate).
- not dragging bins, crates or tubs along the ground.
- ensuring machine harvester is correctly adjusted (i.e. not cutting into soil).
- checking pallets for contamination before use.
- Knives are controlled, including issue and return and cleaning.
- Lights are covered and glass must be protected or a plan is put in place for the disposal of product in the event of breakage.
- Adequate ventilation and extraction must be provided to prevent condensation and excessive dust.
- The use of wood and wooden products must be minimised. Wooden surfaces may be covered to minimise risk of physical contamination (splinters etc.), to minimise risk of microbiological contamination (absorbing water and trapping organic material) and to make surfaces easier to clean.

Good Agricultural Practices (GAP)

Site

- Planning approvals or restrictions must be identified, the Site assessment decision guide must be reviewed for each new site, and relevant records are completed.
- If land has been used for livestock production in the last 12 months:
 - A 12 month exclusion period is required before commencing salad production.
 - If salad production is commenced within 24 months of removing livestock from the site:
 - Relevant members of the Fresh Salad Producers' Forum are aware of the producers' intentions.
 - Land is subject to multiple workings and irrigations.
 - Soil is sampled according and found to have E. coli <10/g, Salmonella Not Detected / 25g.
 - At least one sample of product is collected and found to have E. coli <10/g, Salmonella Not Detected / 25g
 - Additional microbiological testing of product as directed by each Fresh Salad Producers' Forum member being supplied.
- If there is potential for cadmium contamination of leafy green salad vegetables:
 - An analysis of cadmium levels in product is conducted. The maximum level permitted for salad vegetables is 0.1mg/kg.
 - If product exceeds the limit, all relevant customers are advised. Production of leafy green salad at this site should be ceased.
 - Product must be retested every three years if the product test results are less than half the legal limit. If the product test results are greater than half the legal limit, samples are retested every year.
- If there is potential for lead contamination of leafy green salad vegetables:
 - Soil tests for lead are undertaken prior to planting in areas considered at risk.
 - Further technical advice must be sought if soil lead levels exceed 400ppm and an analysis of lead levels in product is needed. The maximum level permitted for vegetables is 0.1mg/kg.
- If there is rubbish (glass, old rubbish dumps, china etc.) on the site or if the site is close to a road, the ground must inspected before commencing and during preparation, with

areas potentially not cropped that have high levels of physical contaminants or close to roadways.

- If there is potential for contamination from persistent chemicals, persistent chemicals of potential concern are identified. Product must be tested for persistent chemicals of potential concern and results checked for compliance with legally permitted levels. Customers must be advised if limits are breached.
- Potentially contaminated sites are marked on the farm map.
- Production is not started if there is insufficient water of the required quality to grow the crop until water requirements are met or additional water sources are secured.

Fertiliser

- Raw manure or human biosolids are not used.
- Non-synthetic fertilisers must not be used on land within 12 months of land being planted with salad crops.
- Produce will only be harvested upon instruction from relevant Fresh Salad Producer Forum member if non-synthetic fertilisers that do not have a Certificate of Analysis are used.
- Controls must be put in place for non-synthetic fertilisers used that are not in direct contact with the crop.
- Fertiliser placement must be accurate, taking wind into account.
- Fertilisers must be incorporated or irrigated as soon as possible after application.
- Records of fertiliser application are kept.
- Non-synthetic fertilisers must be being physically isolated and position of storage must be in an appropriate site.

Chemicals

- Ensure chemical storage, mixing and disposal facilities are located to minimise risk of contamination of product from runoff or direct contact.
- Storage of agricultural chemicals must be controlled.
- Handling and disposal of empty agricultural chemical containers and rinsate must not contaminate product.
- Disposal of obsolete agricultural chemicals is defined.

Pre-harvest water

- Specified limit = E. coli < 126 cfu / 100ml.
- Testing of pre-harvest water:
 - New sources tested monthly for 12 months, then annually at time of greatest risk (based on historical results).
 - Existing sources – tested quarterly for 12 months, then annually at time of greatest risk (based on historical results).
 - Additional tests undertaken in the event of extreme events or likely case of contamination of water supply.
- Water sources must be protected from potential contaminants such as run off from paddocks with livestock, run off from roadways, livestock operations etc. and from human interference.
- Where possible, livestock access to water sources must be prohibited.
- Water sources, water extraction points, drainage, septic tanks etc. are marked on farm map.
- Reclaimed or recycled water must meet the specifications for water used on commercial food crops consumed raw or unprocessed (defined in the Australian Guidelines for Water Recycling). Treatment objective is E. coli < 1/100ml. Water is tested each month during period of use, with E. coli detections reported to relevant members of the Fresh Salad Producers' Forum.

Postharvest water

- Specified limit for postharvest water = 1 E. coli/100mls.
- Water is tested each month during period of use, with a sampling schedule developed and followed (collecting samples from a range of points over 12 month period).
- E. coli detections must be reported to relevant members of the Fresh Salad Producers' Forum.
- Water treatment specifications detailed:
 - Water sprayed onto product or product contact surfaces = greater than or equal to 1ppm Free Available Chlorine (FAC) and pH 6.5 – 7.5.
 - Water used for washing or immersion = 50-100ppm Free Available Chlorine (FAC) or ORP greater than or equal to 650mv and pH 6.5 – 7.5.
 - Information on dosage rates and other key criteria must be obtained for alternative treatment methods.
- Water treatment records are kept, with efficacy verified at least monthly.

Other

- Rubbish is removed from paddocks.
- Controls are defined for actions to be taken if animals or significant numbers of birds enter paddocks.
- Control of weeds, including noxious or toxic weed control, must occur, along with monitoring for weed infestation.
- Produce affected by flooding is controlled including implementing buffer zones, not replanting until 60 days after flood water has receded and maintaining records of location and extent of flooding.

Control of storage

- Not specifically addressed.

Control of processing / preparation / handling

- Product must be refrigerated at 1 - 5°C as soon as possible. Cool room temperatures are checked and recorded at least daily during operation.
- Antimicrobial chemicals must be added to cooling water and monitored or topped up as necessary with records of treatment and monitoring kept.

Transport

- Not specifically addressed.

Calibration

- Equipment used to apply non-synthetic fertilisers must be thoroughly cleaned and sanitised after use or is dedicated for this purpose. Details of cleaning must be documented.
- Refrigeration equipment must be calibrated annually and have a tolerance of no more than +/- 1°C.

Premises construction / maintenance

- Postharvest handling areas / buildings are constructed and maintained to minimise risk of contaminating product:
 - These areas must be free of objectionable odours, dirt, dust or other contaminants.
 - Walls and ceilings must be virtually free of dirt, debris, condensation and mould growth.

- Floors must be solid and in good repair.
- Drains must be covered and maintained.
- Windows and doors must be of solid construction and in good condition to control dust, vermin and other contaminants.
- Postharvest handling areas / buildings must be constructed in a manner and of materials that make them easy to clean.

Control of plant and equipment

- Bores must be controlled – maintained in good condition, surface water diverted away, not positioned close to sources of contamination and upslope from other potential contaminants, disinfected if E. coli levels exceed limits.
- Equipment must be made of non-toxic substances and able to be easily cleaned.
- Irrigation equipment must be stored in a manner that minimises the chances of contamination and lines must be free from water at the end of the season / prior to storage (where possible).
- Equipment must be commissioned at the beginning of the season or after periods of non-use.
- All field harvest, postharvest handling, storage and cooling equipment must be regularly maintained to minimise the potential for breakdown, leakage or malfunction.
- All bins, crates and tubs are inspected for damage, splits and breakage before and during use.
- Engines, hoses etc. from field equipment must be placed over wheel runs wherever possible.
- Bins, crates and tubs must be stored to minimise contamination, particularly from dirt, dust and vermin.
- Bins, crates or tubs must not be used for any other purpose than harvesting and storing salad, unless they are clearly identifiable as not to be used for product.

Cleaning schedule / sanitisation

- A cleaning schedule must be in place for items that contact salad, including knives, blades, belts and food contact surfaces and bins, crates and tubs.
- The cleaning schedule includes toilets, portable toilets, staff lunch rooms and postharvest handling and storage equipment / facilities, particularly cooling and storage facilities and equipment and transport vehicles.
- All chemicals used for cleaning are food grade and Material Safety Data Sheets (MSDS) must be available.
- Any item that is visibly unclean must not be used to handle, transport or store product until it is cleaned or product is protected from potential contamination (for example a clean bin liner used).
- Records of cleaning must be kept.
- If cleaning of equipment is the responsibility of the supplier, there must be documentation clearly defining this responsibility and describing how the equipment is cleaned.

Pest control

- Slug and mouse pellets / baits must be applied in accordance with the label.
- Slug pellets or mouse baits must not be applied to the edible parts of the crop.
- Application methods must not be used where pellets / baits may be collected (lodged) with harvested material or may contaminate packaging / harvest equipment.
- Domestic animals, livestock and wild animals and birds must be restricted in production areas. Guidance is provided about specific control measures.
- Insect controls are in place, including inspection of crop for insect infestation.

- Frog controls are in place, including inspection of crop for frogs.

Product recall

- Not specifically addressed.

Product identification and traceability

- Not specifically addressed.

Personnel hygiene

- All staff, including casuals, are trained in Salad GAP food safety and personal hygiene requirements.
- Training records must be maintained and must specifically cover Salad GAP food safety and personal hygiene requirements.
- Toilets must be provided for all staff, including harvest workers.
- Clean hand washing facilities must be provided for all staff, including harvest workers.
- Wearing of gloves and jewellery must be controlled. Personal items are not taken into paddock.
- Caps are worn or hair must be tied back and contained.
- Workers must wear clean, intact clothing, with no pockets above waist level. Footwear must be cleaned before starting work.
- Wounds must be covered with blue dressings and changed daily.
- Illnesses (such as symptoms of nausea, vomiting, diarrhoea) must be reported, and staff moved to non-produce handling roles.
- A policy addressing return to work following illness must be available and staff must be aware of its requirements.

Training

- Staff handling and using agricultural chemicals must be appropriately trained either externally, or by competent staff. The person responsible for the supervision of use of farm chemicals must have successfully completed recognised chemical user's training.
- Training materials are available in relevant languages and/or pictorially. A translator may be required.
- Staff must be trained in physical contamination.
- Supervisors and key staff must be trained in weed identification (specifically stinging nettles, thorn and deadly nightshade).

Control of use of chemicals

- Chemicals are not applied in conditions where off target application is likely.

SGS HACCP – Client Audit Checklist Version 2.7 (19/06/2011)

General information

HACCP (Hazard Analysis Critical Control Point) is a systematic, preventive approach to food safety. HACCP is commonly used in food production as a tool to identify and control potential risks to product safety, quality and regulatory compliance.

HACCP has seven principles that guide the development of any HACCP Plan. HACCP is also supported by a range of pre-requisite programs.

Most certification bodies have their own HACCP Systems. One has been selected, and the owner of this standard, SGS, has kindly provided their audit checklist, and information on auditing for this report. The SGS Codex Alimentarius Checklist defines the interpretation of HACCP for SGS Systems & Services Certification.

Each CB's audit checklist may be slight different, however all base their checklists around Codex Alimentarius HACCP. It has been suggested by some in the industry that ISO 22000 will eventually replace HACCP as it integrates HACCP and the pre-requisite programs into a quality assurance standard.

The SGS HACCP system includes the following topics:

- Pre Audit Check
- Documentation
- HACCP Team
- Product description and intended use
- Flow Diagram and confirmation
- Hazard analysis / control measures
- Critical control points
- Critical limits
- Monitoring system
- Corrective actions
- Verification
- Product recall
- Plant sanitation
- Personal hygiene
- Good manufacturing practices
- Plant and equipment
- Pest control
- Calibration
- Product identification and trace
- Supplier program

Applicability across the supply chain

HACCP can be applied to many types of businesses, as it is simply a means of assessing hazards to the end product. With food, the hazards that addressed are normally microbiological, chemical, physical, quality and regulatory.

Uptake of the scheme within the sector

It is difficult to determine the number of businesses that have HACCP systems, as only some of these are certified to standalone HACCP. A number of the other food safety

systems include the requirement for a HACCP Plan. SGS would prefer not to provide the numbers certified to SGS HACCP.

Coles

In the updated Coles Standards Matrix²³, HACCP is not listed as an approved system for any supplier; however HACCP training is required every three years for all Coles suppliers certified to the Coles Supplier Requirements.

Woolworths

According to the WQA Standard²⁴, if produce vendors (direct suppliers to Woolworths) purchase produce from other businesses, they must ensure the supplier of the produce is certified to a 3rd party audited quality assurance program. HACCP is listed as an acceptable standard.

Auditing of each system

Certification Body requirements

Not available.

Auditor requirements

Not available.

Audit frequency

Six monthly.

Audit timing

Not available.

Manner of dealing with corrective actions

Critical non-conformances must be rectified within a timeframe commensurate with the risk, up to a maximum of seven days from the date of audit.

Major non-conformances must be rectified within a timeframe commensurate with the risk, up to a maximum of fourteen days from the date of audit.

Minor non-conformances must be rectified within a timeframe commensurate with the risk, up to a maximum of fourteen days from the date of audit.

How microbiological hazards are addressed on-farm

- Survival or multiplication of microorganisms of concern to be addressed in the HACCP Manual.
- Potable water used for postharvest treatment.

Regulatory requirements

- Incoming raw materials to meet FSANZ Food Standard Code requirements.
- Specifications for raw materials, packaging materials, finished product to comply with FSANZ.

²³ Coles Standards Matrix – Version 052011

²⁴ Woolworths Quality Assurance Standard – Primary Production-Produce Version 7 January 2011

- Finished product specification covered by the scope of certification to have ingredient statement as per FSANZ – AFSC, regulatory labelling for GMOs, irradiation, allergens, country of origin, first aid / warning statements etc. Nutritional Information Statements for foods and must comply with AU laws including State Trades, Weights and Measures legislation and EPA.
- Regulatory requirements must be complied with e.g. CoPs, relevant Australian standards.
- A product recall and withdrawal procedure must be developed and effectively implemented based on the FSANZ Recall Protocol.
- Current copy of FSANZ Recall Protocol to be available.
- Training competencies consistent with FSANZ Food Standards Code and Food Acts.

HACCP plan

- A HACCP manual or documents must be developed and implemented.
- Records must be maintained for all documents pertinent to the program including Critical Control Point (CCP) monitoring activities, deviations and associated corrective actions, modifications to the HACCP system, hazard analysis, CCP determination, critical limit determination, verification / validation activities.
- HACCP team must be nominated and documented.
- Flow chart to be developed and verified by the HACCP team.
- A review of the HACCP Plan conducted at least annually and when changes occur to documentation, products or processes. Includes a review of CCP appropriateness and re-validation of critical limits.

Generic HACCP plan used in the development of the system

- Not applicable.

Approved suppliers

- A process and procedure for all purchased inputs that could be a potential source of significant hazards to be developed and implemented.
- Purchased process input must include ingredients, raw material, packaging, agricultural / veterinary, chemicals, transport, storage, calibration, finished products, ice, cleaning services, consultants etc. The supply program must address:
 - monitoring of incoming goods / services.
 - register of approved suppliers.
 - specifications for raw materials, packaging materials, finished product obtained.
 - methods for verifying performance.

Control of inputs

- Incoming materials are inspected for contamination from pests.
- Incoming raw materials must meet FSANZ Food Standard requirements and be marked to facilitate stock rotation.

Good Manufacturing Practices (GMP)

- Procedures and policies for GMP must be developed, documented and implemented commensurate with risk relating to personnel, premises, equipment, surrounds and services which may have an impact on the safety / quality of the food / product being processed / distributed and include where applicable:
 - Dropped product policy.
 - Glass policy.

- Wood policy.
- Stock rotation policy.
- Water quality policy.
- Waste, re-work, by-products material and work in place policy.
- Signage policy reinforcing food safety and quality work practices, techniques.
- Food handling policy.
- Processing environment protection policy.
- Chemical storage.
- Staff, contractor, visitor, maintenance movement policy.
- Cross contamination procedures.
- Procedures must be documented and implemented to ensure allergens are clearly identified and controlled.
- Policies for personnel hygiene must be documented and implemented for all employees, visitors, maintenance and contractor personnel, including:
 - protective clothing.
 - footwear.
 - hair covering, beard nets, protective headgear.
 - gloves.
 - jewellery and cosmetics policy including false finger nails.

Good Agricultural Practices (GAP)

- Sewerage flow into water source restricted.
- Agricultural production controls in place..
- Site boundaries defined.
- No pest harbourage.
- Adequate drainage around food production areas.
- Environmental pollutants and flooding to be considered.

Control of storage

- Chemical, ingredient, packaging, and flammable material storage to be secured, properly enclosed and ventilated.
- Storage facilities adequate.

Control of processing / preparation / handling

- Shelf life validation to be undertaken where applicable.
- Allergen procedures documented and implemented as required.

Transport

- Transport vehicles used for product / packaging to be maintained in good repair and in hygienic condition.

Calibration

- Calibration procedures developed, documented and implemented for all inspection, measuring and test equipment (IMTE).
- A register of all IMTE must be maintained.
- The frequency of calibration and the criteria for accuracy, methods for calibration and reference to recognised standards or recognised methods must be documented.
- A method of identifying equipment when found to be out of calibration must be in place, as must a process to ensure checking of material produced while equipment was out of calibration.

- Records of checks, verification, responsibility and corrective action must also be kept.

Premises construction / maintenance

- Staff amenities conveniently located without posing a contamination risk to product.
- Records of maintenance maintained for work.
- Exterior of the building and surrounds to be maintained.
- High / low risk production areas must be segregated, with one way flow for potentially hazardous foods.
- Building designed to minimise dirt, debris and pests.
- Interior walls, floors and ceilings must be impervious and easy to clean.
- Drainage, sewage flow and waste disposal must be functional and not pose a risk to product.
- Doors / windows must exclude dust / pests / airborne organisms; air filtered where necessary and pressure differentials in place between high / low risk areas.
- On-site laboratories segregated from production areas.
- Services lines to be protected and clearly marked.
- Air quality / ventilation to be sufficient to minimise condensation.
- Lighting facilities must be adequate.
- Premises and surrounds to be designed and maintained to prevent access, minimise harbourage of pests.

Control of plant and equipment

- Adequate and correctly located facilities provided for cleaning utensils / equipment / personnel.
- Preparation, processing, packing and chilling equipment to be fit for purpose, easily cleaned and frequently assessed.
- Refrigeration units to be maintained and calibrated.

Cleaning schedule / sanitisation

- Hygiene and sanitation procedures must be developed, documented and implemented where applicable.
- Cleaning schedule to be developed and implemented.
- Cleaning equipment to be identified and segregated from production areas where applicable.
- Cleaning to be monitored.
- Material Safety Data Sheets (MSDSs) for all cleaning chemicals must be available on site.
- Evidence that chemicals are approved for food use must be maintained.
- A verification schedule must be developed that includes environmental testing.
- A between batch cleaning procedure must be developed where applicable.

Pest control

- Effective pest control procedures must be developed, documented and implemented for the control of all pests and must be appropriate to prevent contamination of product.
- Records of application, treatments, monitoring and corrective action.
- Bait maps, activity statements, records of approved chemicals, MSDSs and pest sightings are kept.
- Baits / insectocuters / pheromone traps to be placed in areas where food may become contaminated from pests.
- Activities monitored / verified and records maintained including corrective actions.

Product recall

- A product recall and withdrawal procedure must be developed and effectively implemented based on the FSANZ Recall Protocol for the recall of food outside the direct control of the consumer.
- Mock recall to be undertaken and assessed for effectiveness.

Product identification and traceability

- Procedures must be developed and implemented to ensure that all materials used in, or produced by, production processes are unambiguously identified as to grade, inspection status and description.
- Incoming raw materials must be able to be identified and traced back to suppliers.
- Finished product specification must contain set criteria.

Personnel hygiene

- Policies for personnel hygiene must be documented and implemented for all employees, visitors, maintenance and contractor personnel, including:
 - Washing hands - including use of sanitiser.
 - Illness policy including communicable diseases as prescribed by FSANZ Food Standards Code 3.2.2.
 - Injury policy including wound dressing.
 - Eating, drinking and smoking policy.

Training

- A procedure must be developed and implemented to ensure only suitably trained staff conduct activities that may have an effect on food safety.
- A training schedule must be developed.
- Regular review of training needs must be conducted.
- Staff training for all relevant staff (including managers and supervisors) relative to the HACCP plan must occur. Training must include all food safety critical operations associated with the HACCP plan.
- Records of training to be kept.
- Training competencies consistent with FSANZ Food Standards and Food Acts.

Control of use of chemicals

- Records for application / use of agricultural chemicals kept.

SQF 1000 Code – 5th Edition August 2009 – Revised January 2010 (Level 3)

General information

The Safe Quality Food (SQF) 1000 Code provides for the primary producer a food safety and quality management certification program that is tailored to their needs. It enables them to meet product trace, regulatory, food safety and commercial quality criteria in a structured and cost effective manner.

In 1998 the Code was developed and pilot programs implemented to ensure its applicability to the primary production sector. It was prepared with the assistance of primary producers and experts in quality management, food safety, food regulation, food processing, agriculture production systems, food retailing, food distribution and the Hazard Analysis Critical Control Point (HACCP) Guidelines.

The Food Marketing Institute (FMI) acquired the rights to the SQF Program in August 2003 and has established the SQF Institute (SQFI) Division to manage the program.

The SQFI Technical Advisory Council reviews and makes recommendations on changes to the Code in line with the current requirements and expectations of the global food sector and other comments received from stakeholders with amendments to the Code made by the 3rd anniversary date of the previous edition.

The SQF 1000 Code is divided into three certification levels which are designed to indicate the level of development of a producer's food safety and quality management system as follows:

- **Level 1 - Food Safety Fundamentals** – Indicates that Pre-requisite Programs and fundamental food safety controls have been implemented to provide a sound foundation for the further development of the Supplier's management system.
- **Level 2 Certified HACCP Based Food Safety Plans** – Incorporates all Level 1 system requirements and indicates that a food safety risk analysis of the crop, its production and harvest has been completed to identify the hazards and the action taken to eliminate, prevent or reduce their occurrence.
- **Level 3 Comprehensive Food Safety and Quality Management System** – Incorporates all Level 1 and Level 2 system requirements and indicates that a food quality risk analysis of the product and its associated process has been completed, that the actions taken to prevent the incidence of poor quality have been implemented and the remaining quality management system procedures have been implemented.

SQF 1000 has the following main elements:

- Document control and records
- Specification
 - Raw materials
 - Packaging
 - Contract service providers
 - Finished product
- Attaining food safety
 - Food legislation
 - Food safety fundamentals
 - Food safety plan
 - Food quality plan
 - Incoming goods and services

- Corrective and preventive action
- Non-conforming product or equipment
- Verification
- Product identification trace and recall
- Site security

Implementation

A Supplier can choose to develop and implement their SQF 1000 System themselves or they can use a SQF Consultant.

The SQF Code requires the Producer to have a designated SQF Practitioner with responsibility and authority to:

- i. lead the development and implementation of Food Safety Fundamentals, the Food Safety Plan and the Food Quality Plan;
- ii. validate any major changes to Food Safety Fundamentals, Food Safety Plans and Food Quality Plans that have an impact on the Producer's ability to deliver safe food;
- iii. oversee the development, implementation, review and maintenance of the SQF 1000 System; and
- iv. take appropriate action to maintain the integrity of the SQF 1000 System.

The SQF Practitioner shall be:

- i. verified by the SQF Auditor at each Audit as meeting the following requirements:
 - a. be employed by the Supplier as a permanent company employee and hold a position of responsibility in relation to the management of the Suppliers SQF 1000 System;
 - b. have completed a HACCP Training Course and be experienced and competent to implement and maintain HACCP based Food Safety Plans; and
 - c. have an understanding of the SQF 1000 Code and the requirements to implement and maintain SQF 1000 Systems relevant to the Suppliers Scope of Certification.

All SQF Consultants are registered by the SQFI to work in specific Food Sector Categories. They are issued with an identity card indicating the Food Sector Categories in which they are registered.

Applicability across the supply chain

The scope of SQF 1000 is intended to be primary agricultural producers. Included in this scope for application in produce is the grower/shipper/packer who is packing self-grown product.

The SQF 1000 Code Level 3 can also be implemented by entities providing agricultural contract services to the Primary Producer. Agricultural contract services include the provision of cultivation, sowing, spraying and harvesting of a crop, and the storage and transport of a crop.

This Code is not designed for standalone packhouses; these producers must implement the SQF 2000 Code.

Uptake of the scheme within the sector

According to the SQFI website, there are 69 businesses involved in Fruit and Vegetable production certified to SQF 1000. Of these, 40 producers are located in Australia. The high

numbers in Australia is probably due to the fact that the system was originally developed here in 1998.

Produce grown by Australian producers certified to SQF 1000 is varied.

- Multiple fruit crop growers = 18%
- Multiple vegetable crop growers = 18%
- Grape growers = 13%
- Salad growers = 10%

The remainder of certified producers grow single vegetable, fruit and herb crops.

Coles

In the updated Coles Standards Matrix²⁵, SQF 1000 Level 3 has been included as an acceptable standard for:

- Produce Growers.
- Produce Growers – with Packing Facility.

Woolworths

According to the WQA Standard²⁶, if produce vendors (direct suppliers to Woolworths) purchase produce from other businesses, they must ensure the supplier of the produce is certified to a 3rd party audited quality assurance program. SQF 1000 Level 3 is listed as an acceptable standard.

Auditing

Certification Body requirements

The Certification Body (CB) must be accredited by JAS-ANZ or international equivalent as meeting the requirements of ISO/IEC Guide 65/IEC:1996 General requirements for bodies operating product certification systems.

The CB must also meet the requirements of Criteria for SQF Certification Bodies 6th Edition, which is SQF's guidance document relating to ISO/IEC Guide 65.

Auditor requirements

Clause 5.1.1 of the Criteria for SQF Certification Bodies 6th Edition states that "...the Certification Body shall ensure that all SQF Auditors and Contract Auditors retain qualifications, skills and experience necessary to perform their duties" but does not refer to any specific training or qualifications.

Auditors must not audit the same supplier for more than three consecutive certification cycles.

Auditors must be registered by the Certification Body with SQF and must sign the Code of Conduct for SQF Auditors.

Audit frequency

Annual certification audits with the possibility of six monthly surveillance audits, depending on audit outcomes or Certification Body recommendations.

Audit timing

Where applicable, audits must be conducted during the main part of the season.

²⁵ Coles Standards Matrix – Version 052011

²⁶ Woolworths Quality Assurance Standard – Primary Production-Produce Version 7 January 2011

Manner of dealing with corrective actions

Initial certification

Certification only proceeds (without re-audit) if the audit results in no critical or major non-conformances and if the overall audit rating is greater than C (i.e. "Considered to comply").

Re-certification

Critical non-conformances may result in suspension (pending appropriate corrective action) or certification being withdrawn.

If major or minor non-conformances are identified or an overall rating less than C is awarded, then corrective actions must be addressed prior to re-certification.

If no non-conformances, or only minor non-conformances and an overall rating of greater than C is awarded, the supplier is re-certified.

How microbiological hazards are addressed on-farm

- Irrigation water quality will be established as applicable, based on the hazard analysis, best practices within country of production and any applicable legislation.
- Postharvest water shall comply with potable water microbiological standards in the country of production.
- No reference to product microbiological limits.

Regulatory requirements

- Records shall be retained in accordance with periods specified by a customer or legislation (regulation).
- Packaging materials that impact on finished product safety and quality shall comply with the relevant legislation.
- Product supplied shall comply with the food safety legislation that applies to the product and its production in the country of its origin and destination.
- Compliance with legislative requirements applicable to trade weights and measures, Minimum Regulatory Limits (MRL's), packaging (if used), product description and related labelling declarations must be demonstrated.
- Chemical storage sheds shall be compliant with national and local legislation.
- All applications of soil amendments are in accordance with National or Local Guidelines, Best Practices and Codes of Good Agricultural Practice.

HACCP plan

- Food Safety Plans and Food Quality Plans are to be developed based on Codex HACCP.
- Food Safety Fundamentals outlined in the Food Safety Plans and Food Quality Plans shall be reviewed when any changes implemented have an impact on the producer's ability to deliver safe, quality food.
- An analysis of the hazards associated with the site and the source, storage and use of production inputs that may impact on the producers ability to deliver safe, good quality products shall be undertaken and control measures implemented and documented in a Food Safety Plan or Food Quality Plan.
- Critical limits associated with the control measures shall be validated and verified by the SQF practitioner.
- Those Pre-requisite Programs applicable to the Scope of Certification that outline the means by which food safety is controlled and assured shall be documented, implemented, validated and verified.

- Verification activities shall be the responsibility of the SQF Practitioner and undertaken at a suitable frequency with records kept.

Generic HACCP plan used in the development of the system

- Not specified.

Approved suppliers

- Specifications for contract services that impact on finished product safety and quality (e.g. pest control contractors, harvesting contractors, spray contractors, crop protection plan development consultants, animal health plan development consultants and transport contractors) shall be documented and current, with a register maintained.
- Controls must be in place for the selection, approval and monitoring of Approved Suppliers.
- Procedure to be documented and implemented for selecting, evaluating, approving and monitoring Approved Suppliers. Emergency suppliers may be sourced.
- A register of Approved Suppliers shall be maintained.
- Records of inspections and audits of Approved Suppliers shall be maintained.

Control of inputs

- Specifications for purchased raw materials that impact on finished product safety and quality shall be obtained and current with a register kept.
- Specifications for all packaging materials that impact on finished product safety and quality shall be provided and / or developed with a register kept.
- Packaging material shall not compromise product safety and quality and will be fit for its intended purpose and suitable for use.
- Raw materials and services that impact on finished product safety and quality shall be inspected or analysed before use in emergency circumstances or supplied by an Approved Supplier.
- Water used for washing and treating product, cleaning food contact surfaces and mixing sanitiser solutions shall comply with potable water microbiological standards in the country of production, with evidence of compliance kept.
- Ice shall be made from potable water.

Good Manufacturing Practices (GMP)

- Regular internal audits to verify the effectiveness of the SQF 1000 System shall be documented and implemented with records kept.
- Access to crop during growing and harvest shall be restricted.
- A food defence protocol shall be prepared.
- Any relevant records shall be kept e.g. employment records.
- First aid facilities shall be provided.
- Employees working in the packhouse must comply with the personal hygiene and good manufacturing requirements.
- Appropriate signage must be posted reminding employees to comply with Good Manufacturing Practices.
- Employee break areas must be separate from the packing area.
- Controls must be in place for use and sanitation of knives and tools used to trim fresh produce.
- Tools used by maintenance personnel must be clean, sanitary and corrosion-free.
- The site must ship product using first-in first-out method.

- A Foreign Matter and Glass Protocol shall be documented, implemented and verified.

Good Agricultural Practices (GAP)

- Controls must be in place for sourcing and treating irrigation water.
- No raw untreated manure shall be used.
- Soil amendment²⁷ treatment and application methods shall be documented, implemented and designed to prevent contamination of product.
- Controls must be in place for methods used to treat manure and other untreated organic fertilisers.
- Controls must be in place for the application of organic soil amendment applications.
- Trash removed from field packing operations must be transported out of the field in a separate vehicle.

Control of storage

- Construction approvals must be available for any chilling and chill storage facility.
- Chilling and cold storage facilities shall be fitted with temperature monitoring equipment or a suitable temperature monitoring device.
- Chill and cold storage loading dock areas shall be appropriately sealed, drained and graded.
- Packaging storage facilities shall be constructed and designed to keep packaging dry, clean and free from any contamination so it remains fit for purpose.
- Harvesting and packing utensils are to be stored hygienically and away from farm machinery, hazardous chemicals and toxic substances.
- Farm machinery, conveyors, harvesting and processing rigs construction and storage shall be such that food safety and quality is not affected.
- Hazardous chemicals, toxic substances, animal medicines and petroleum products shall be stored so as not to present a hazard to employees, product, product handling equipment or areas in which product is handled, stored or transported.
- Chemical storage sheds must be designed and constructed to prevent food safety risks, with an inventory of products kept.
- Storage of fertilisers/soil amendments shall be isolated and stored separately so as not to pose a food safety risk, with an inventory of products kept.
- Provision shall be made to store employee's personal belongings away from crops, harvesting and field processing and packing operations, and processing equipment.
- Storage areas for packaging materials, product and incoming materials must be adequate to protect the product from contamination.
- Cleaners and sanitisers must be stored in a secure area away from water treatment chemicals.
- All product and packaging material shall be kept off the ground and off the floor of any transport vehicles.
- Waste shall be contained in the bins identified for this purpose. Waste shall be removed on a regular basis and not left to accumulate.
- Employees must have a designated area for storage of personal belongings.

Control of processing / preparation / handling

- A procedure must be developed and documented outlining how non-conforming product or equipment is controlled.

²⁷ Soil Amendment is a term covering all forms of organic and inorganic fertiliser.

Transport

- The practices applied during loading, transport and unloading of crops shall be documented, implemented and designed to maintain appropriate storage conditions and product integrity.

Calibration

- Methods and responsibility for calibrating and re-calibrating measuring, test and inspection equipment used for monitoring activities, or to demonstrate compliance with customer specifications shall be documented and implemented.
- Equipment shall be calibrated against national or international reference standards and methods or to accuracy appropriate to its use, with evidence to support the calibration reference method applied.
- Calibration shall be performed according to regulatory requirements and/or to the equipment manufacturers recommended schedule.
- Calibration records shall be maintained.

Premises construction / maintenance

- The property, buildings and equipment shall be located, constructed and designed to facilitate the proper production, handling and storage of safe product.
- Floors, walls, ceilings, doors, frames and hatches shall be of a solid construction.
- Floors, walls and ceilings must be constructed of a non-porous material that can be cleaned and sanitized.
- Internal surfaces shall be smooth and impervious with a light coloured finish.
- Lighting shall be provided with protective covers.
- Doors, windows and loading docks must remain closed when not in use.
- Seals around exterior openings must be rodent and pest-proof.
- Dock doors must have protection to prevent contamination from exterior pests.
- Overhead lighting must be shielded, with adequate lighting provided in the work area.
- Drains must be located appropriately.
- The exterior areas of the shed and packhouse must be maintained free of litter and weeds.
- Trash storage units must adequately contain the waste and be removed at appropriate intervals.
- Lubricants used on or near product contact equipment must be appropriate for use and stored to prevent product contamination.
- Hydrocoolers, if used, must be included in a Preventive Maintenance schedule.
- The methods and responsibility for maintenance of equipment and buildings shall be planned, scheduled and carried out in a manner that prevents any risk of contamination of product or equipment.
- Tractors, harvesters, field packing equipment and machinery driven over crop shall be fitted with drip trays to prevent contamination of the crop by lubricants and oils.

Control of plant and equipment

- Equipment, parts and pallets may not be stored next to or against the exterior walls of the facility.
- Conveyors, flumes, sorting tables and other product contact equipment must be designed and constructed of materials that are approved for use in a food production facility. The contact surface must not have flaking paint that could contaminate the produce.
- Food contact equipment must be included in a regularly scheduled maintenance plan.

Cleaning schedule / sanitisation

- The site must have documented verification of completed sanitation tasks.
- Chemicals used to clean and sanitise the equipment must be approved for use in a food processing environment.
- Designated tools must be used to clean and sanitise the food product contact surfaces. They must be non-porous or single use and have a designated storage location.
- The methods and responsibility for the cleaning of product contact surfaces, field processing equipment and sanitary facilities shall be documented and implemented.
- A verification schedule shall be prepared indicating the frequency of verifying the effectiveness the cleaning of product contact surfaces, field processing equipment and sanitary facilities and indicating who is responsible for completing verification activities.
- Food contact equipment surfaces must be cleaned and sanitised on a daily basis during the packing season.

Pest control

- The methods for controlling pest and vermin infestation on the site or facilities shall be documented and implemented.
- The property, storage facilities, machinery and equipment shall be kept free of waste or accumulated debris so as not to attract pests and vermin.
- A site map must be developed showing the identification, location, number and type of bait stations.

Product recall

- Responsibility and methods used to withdrawal and recall product shall be documented and implemented.
- Investigation shall be undertaken to determine the cause of a withdrawal / recall and details of investigations and any action taken shall be documented.
- The product withdrawal and recall system shall be reviewed and tested at least annually.
- Records of all product withdrawals and recalls shall be maintained.

Product identification and traceability

- The methods and responsibility for identifying product during all stages of production and storage shall be documented and implemented.
- The responsibility and methods used to trace product shall be documented and implemented.
- Documentation of the field and quadrant harvested to be maintained.

Personnel hygiene

- Personnel, visitors and contractors shall be subject to a medical screening for infectious diseases which can be carried with food as a vehicle.
- Controls must be put in place for exposed cuts, sores or lesions, smoking, chewing, eating, drinking or spitting, and fingernail polish.
- Hand wash stations must be available to all employees.
- Toilet facilities shall be provided and designed, constructed and located so as to be easily accessible and not present a food safety hazard.
- A procedure for clean hands and hand washing requirements must be developed and documented.
- Protective clothing policy must be developed and documented including gloves and aprons.

- Children and infants shall not be permitted to enter any packing or storage areas and must be supervised at all times when in fields.
- Protective clothing shall be effectively, maintained, stored, laundered and worn so as to protect product from risk of contamination.
- Jewellery and other loose objects shall not be worn or taken onto any growing, product handling or storage operations.

Training

- Contract personnel to be trained accordingly.
- Appropriate training shall be provided for personnel carrying out the tasks critical to the effective implementation of the SQF 1000 System and the maintenance of food safety.
- An employee training program shall be documented and implemented.
- A training skills register describing who has been trained in relevant skills shall be maintained.
- Employees involved in loading, transport and unloading events shall be appropriately trained.

Control of use of chemicals

- Flume water treated with chemicals must be monitored.
- Chemicals shall be purchased from an Approved Supplier in accordance with applicable legislation.
- An inventory of all chemicals purchased and used shall be maintained.
- A crop protection action plan shall be prepared and implemented.
- The person making decisions on chemical application shall demonstrate knowledge of and access to, information regarding chemical applications and the Maximum Residue Levels allowable in destination markets.
- Use only chemicals approved for use in the intended market.
- Demonstrate competency and knowledge of chemical application and crop withholding periods.
- Ensure crop applications and application rates for target pests and diseases comply with label recommendations.
- Demonstrate the timing between chemical application and harvest complies with the approved harvest interval for the chemical applied.
- Maintain a current chemical register and keep records of all chemicals use.
- The Producer shall dispose of chemical waste and empty containers in accordance with regulatory requirements.

SQF 2000 Code – 6th Edition August 2008 – Amended July 2010 (Level 3)

General information

The SQF 2000 Code is designed for use by all sectors of the food industry. The Code is a HACCP quality management system that utilises CODEX HACCP Principles and Guidelines, proven methods used by the food industry to reduce the incidence of unsafe food reaching the marketplace. It is designed to support industry or company branded product and to offer benefits to Suppliers and their customers at all links in the food supply chain. Products produced and manufactured under the SQF 2000 Code certification retain a high degree of acceptance in global markets.

In 1994 the Code was developed and pilot programs implemented to ensure its applicability to the food industry. It was prepared with the assistance of experts in quality management, food safety, food regulation, food processing, agriculture production systems, food retailing, food distribution and the Hazard Analysis Critical Control Point (HACCP) Guidelines.

The Food Marketing Institute (FMI) acquired the rights to the SQF Program in August 2003 and has established the SQF Institute (SQFI) Division to manage the Program.

The SQFI Technical Advisory Council reviews and makes recommendations on changes to the Code in line with the current requirements and expectations of the global food sector and other comments received from stakeholders with amendments to the Code made by the 3rd anniversary date of the previous Edition.

The SQF 2000 Code is divided into three Certification levels which are designed to indicate the level of development of a producer's food safety and quality management system as follows:

- **Level 1 - Food Safety Fundamentals** – Indicates that Pre-requisite Programs and fundamental food safety controls have been implemented to provide a sound foundation for the further development of the Supplier's management system.
- **Level 2 Certified HACCP Based Food Safety Plans** – Incorporates all Level 1 system requirements and indicates that a food safety risk analysis of the crop, its production and harvest has been completed to identify the hazards and the action taken to eliminate, prevent or reduce their occurrence.
- **Level 3 Comprehensive Food Safety and Quality Management System** – Incorporates all Level 1 and Level 2 system requirements and indicates that a food quality risk analysis of the product and its associated process has been completed, that the actions taken to prevent the incidence of poor quality have been implemented and the remaining quality management system procedures have been implemented

Elements within the system include:

- Commitment including Management, Food Safety and Quality Management System and Business Continuity
- Document Control and Records
- Specification and Product Development including raw materials, packaging and contractors
- Attaining Food Safety including non-conforming product, corrective and preventive action, rework, release and stock rotation
- Verification
- Product identification, Trace, Withdrawal and Recall
- Site Security

- Identity Preserved Foods

Implementation

A Supplier can choose to develop and implement their SQF 2000 System themselves or they can use a SQF Consultant.

The SQF Code requires the Producer to have a designated SQF Practitioner with responsibility and authority to:

- v. lead the development and implementation of Food Safety Fundamentals, the Food Safety Plan and the Food Quality Plan;
- vi. validate any major changes to Food Safety Fundamentals, Food Safety Plans and Food Quality Plans that have an impact on the Producer's ability to deliver safe food;
- vii. oversee the development, implementation, review and maintenance of the SQF 2000 System; and
- viii. take appropriate action to maintain the integrity of the SQF 2000 System.

The SQF Practitioner shall be:

- i. verified by the SQF Auditor at each Audit as meeting the following requirements:
 - a. be employed by the Supplier as a permanent company employee and hold a position of responsibility in relation to the management of the Suppliers SQF 2000 System;
 - b. have completed a HACCP Training Course and be experienced and competent to implement and maintain HACCP based Food Safety Plans; and
 - c. have an understanding of the SQF 2000 Code and the requirements to implement and maintain SQF 2000 Systems relevant to the Suppliers Scope of Certification

All SQF Consultants are registered by the SQFI to work in specific Food Sector Categories. They are issued with an identity card indicating the Food Sector Categories in which they are registered.

Applicability across the supply chain

The scope of SQF 2000 is the manufacture, processing, transport, storage, distribution and supply of raw materials and ingredients, food products and processed or prepared foods and beverages or supplying contract services related to food manufacturing, processing or distribution activities.

This code can be implemented on-farm when packing occurs and in a standalone packhouse.

Uptake of the scheme within the sector

According to the SQFI website, there are 76 businesses involved in Fruit and Vegetable production certified to SQF 2000 in Australia. This does not include those that are certified for Fruit and Vegetable processing, or those registered as a broker, agent or distributor.

Coles

In the updated Coles Standards Matrix²⁸, SQF 2000 Level 3 has been included as an acceptable standard for:

- Produce Growers – with Packing Facility (for packing site only).

²⁸ Coles Standards Matrix – Version 052011

- Produce Packing Facility.

Woolworths

According to the WQA Standard²⁹, if produce vendors (direct suppliers to Woolworths) purchase produce from other businesses, they must ensure the supplier of the produce is certified to a 3rd party audited quality assurance program. SQF 2000 Level 3 is listed as an acceptable standard.

Auditing

Certification Body requirements

The Certification Body (CB) must be accredited by JAS-ANZ or international equivalent as meeting the requirements of ISO/IEC Guide 65/IEC:1996 General requirements for bodies operating product certification systems.

The CB must also meet the requirements of Criteria for SQF Certification Bodies 6th Edition, which is SQF's guidance document relating to ISO/IEC Guide 65.

Auditor requirements

Clause 5.1.1 of the Criteria for SQF Certification Bodies 6th Edition states that "...the Certification Body shall ensure that all SQF Auditors and Contract Auditors retain qualifications, skills and experience necessary to perform their duties" but does not refer to any specific training or qualifications.

Auditors must not audit the same supplier for more than three consecutive certification cycles.

Auditors must be registered by the Certification Body with SQF and must sign the Code of Conduct for SQF Auditors.

Audit frequency

Annual certification audits with the possibility of six monthly surveillance audits, depending on audit outcomes or Certification Body recommendations.

Audit timing

Where applicable, audits must be conducted during the main part of the season.

Manner of dealing with corrective actions

Initial certification

Certification only proceeds (without re-audit) if the audit results in no critical or major non-conformances and if the overall audit rating is greater than C (i.e. "Considered to comply").

Re-certification

Critical non-conformances may result in suspension (pending appropriate corrective action) or certification being withdrawn.

If major or minor non-conformances are identified or an overall rating less than C is awarded, then corrective actions must be addressed prior to re-certification.

If no non-conformances, or only minor non-conformances and an overall rating of greater than C is awarded, the supplier is re-certified.

²⁹ Woolworths Quality Assurance Standard – Primary Production-Produce Version 7 January 2011

How microbiological hazards are addressed

- Finished product specifications shall include microbiological limits.
- Microbiological analysis of the water and ice supply shall be conducted to verify the cleanliness of the supply, the monitoring activities and the effectiveness of the treatment measures implemented.
- Water shall comply with national or internationally recognised potable water microbiological and quality standards as required.

Regulatory requirements

- The Code makes reference to the current edition of the CODEX Alimentarius Commission Guidelines for the Application of the Hazard Analysis and Critical Control Point (HACCP) System and the National Advisory Committee on Microbiological Criteria for Foods (NACMCF) Hazard Analysis and Critical Control Point Principles and Application Guidelines, adopted August 14 1997.
- Records to be kept in accordance with periods specified by a customer or legislation (regulation).
- Specifications for all packaging materials that impact on finished product safety and quality to comply with relevant legislation.
- Suppliers must meet food safety standards outlined in the legislation and demonstrate compliance with legislative requirements applicable to trade weight and measures, packaging, product description and nutritional and additive labelling and, where necessary, demonstrate adherence to specific religious certification requirements and allergen controls and related labelling declarations.
- Hazardous chemical and toxic substance storage facilities shall be compliant with national and local legislation.
- Unused pest control chemicals and empty containers shall be disposed of in accordance with regulatory requirements.
- Unused detergents and sanitisers and empty containers shall be disposed of in accordance with regulatory requirements.

HACCP plan

- The SQF Practitioner will lead the development and implementation of the Food Safety and Food Quality Plans which are to be reviewed at least annually or when any changes implemented have an impact on the supplier's ability to deliver safe, quality food, with records kept.
- Changes to the Food Safety Fundamentals will be validated by the SQF Practitioner.
- The Plans will be prepared in accordance with the HACCP method, implemented, maintained, validated and verified.
- The Plans must include process controls at control points in production to monitor product safety, identify when a process is deviating from set parameters and make corrections to keep a process under control.
- The Plans will cover a food or food group and the associated process.

Generic HACCP plan used in the development of the system

- Not specified.

Approved suppliers

- The responsibility and methods for selecting, evaluating, approving and monitoring an Approved Supplier shall be documented and implemented.

- A register of Approved Suppliers and records of inspections and audits of Approved Suppliers shall be maintained.
- Monitoring of Approved Suppliers shall be based on the prior good performance of a supplier and the risk level of the raw materials supplied.
- A register of Approved Suppliers shall be maintained.
- Records of inspections and audits of Approved Suppliers shall be maintained.

Control of inputs

- Specifications for raw materials and ingredients that impact on finished product safety and quality shall be documented and kept current.
- Specifications must be available for all packaging materials that impact on finished product safety and quality.
- Raw materials and services that impact on finished product safety and quality shall be supplied by an Approved Supplier.
- Non Approved Suppliers may be used in an emergency situation provided the raw materials and ingredients are inspected or analysed before use.
- Ice to be derived from potable water.

Good Manufacturing Practices (GMP)

- A business continuity plan is to be developed and reviewed annually, outlining known threats to a business, and the methods and responsibility the organisation will implement to cope with these to ensure they deliver safe, quality food.
- The methods, responsibility and criteria for preventing food adulteration caused by a deliberate act of sabotage or terrorist like incident shall be documented, implemented and maintained.
- Protective clothing shall be manufactured from material that is non-toxic and easily cleaned.
- Controls must be in place for construction, location and provisions of hand wash basins.
- Additional facilities shall be provided in circumstances where foods are exposed, processed or considered High Risk including hands free operated taps and hand sanitisers.
- The use of non-potable water shall be controlled so that lines are clearly identified, there is no cross contamination between potable and non-potable water lines, and a non-return device is installed to prevent back flow.
- On-site laboratories and their outputs shall be located separate from any food processing or handling activity and designed to limit access only to authorised personnel.
- Staff amenities to be constructed with consideration to:
 - Lighting
 - Ventilation
 - Change Rooms
 - Staff and Visitors
 - Processing Personnel
 - Storage of Clothing and Personal Items
 - Showers
 - Laundry
 - Sanitary Facilities
 - Toilet Rooms
 - Sanitary Drainage
 - Hand Wash Basins
 - Signage
 - Lunch Rooms
 - First Aid Facilities

- Waste shall be effectively, efficiently and regularly removed from the premises and the surrounds and not pose a threat to the hygienic operation of the premises.
- The responsibility and methods used to collect and handle dry, wet and liquid waste and store prior to removal from the premises shall be documented and implemented.
- Designated waste accumulation areas shall be maintained in a clean and tidy condition until such time as external waste collection is undertaken.
- Adequate provision shall be made for the disposal of all liquid and solid processing waste.
- Instructions on how to identify, handle, store and segregate raw materials containing allergen causing agents shall be provided to staff responsible for receiving those target raw materials.
- Provision shall be made to clearly identify and segregate foods that contain allergen causing agents.
- Control of physical contaminants (foreign matter, glass, wood, metal) to be implemented with contamination incidents managed and recorded.
- Monitoring of water microbiology, quality, treatment equipment and treated water must occur.

Good Agricultural Practices (GAP)

- Not addressed.

Control of storage

- Racks and containers for storing cleaned utensils and protective clothing shall be provided as required.
- Controls around construction, size and temperature for refrigeration systems.
- Storage rooms shall be designed and constructed to allow for the hygienic and efficient storage of product, equipment and receptacles including:
 - dry ingredient and other shelf stable packaged goods.
 - packaging.
 - equipment and receptacles.
- Loading and unloading docks shall be designed to protect product during loading and unloading.
- Hazardous chemicals and toxic substances shall be stored so as not to present a hazard to staff, product, packaging, product handling equipment or areas in which product is handled, stored or transported.
- Pesticides, rodenticides, fumigants and insecticides shall be stored separate from sanitisers and detergents.
- All chemicals shall be stored in their original containers.
- A risk analysis shall be undertaken on any alternative storage conditions to ensure there is no risk to the integrity of those goods or contamination or adverse effect on food safety and quality.
- Dry ingredients and packaging shall be received and stored separately from frozen and chilled raw materials, kept in appropriate containers as required and stored off the floor.
- Unprocessed raw materials shall be received and segregated.
- Provision is to be made for the containment and regular disposal of used cartons and packaging so that there is no risk to product.
- Dry waste held on site prior to disposal shall be stored in a separate storage facility.
- Liquid waste may be held in a designated storage area in lidded containers prior to disposal so as not to present a hazard.
- All wash down hoses shall be stored on hose racks after use and not left on the floor.

Control of processing / preparation / handling

- Document and implement the responsibility and methods outlining how non-conforming product or equipment detected during receipt, storage, processing, handling or delivery is handled.
- Non-conforming product or equipment is quarantined, identified, handled and disposed of in a manner that minimises the risk of inadvertent use, improper use or risk to the integrity of finished product.
- Quarantine records, and records of the handling and disposal of non-conforming product shall be maintained.
- A procedure for reworked product shall be documented and implemented with records kept.
- Controls for the release of product shall be documented and implemented with records kept.
- In-line process control checks to be completed.
- Effective stock rotation principles shall be applied, documented and implemented.
- Raw materials, finished product and work in progress to be sampled, inspected and/or analysed as required with records kept.
- Adequate supplies of potable water shall be provided for use during processing operations and as an ingredient.
- Thawing of product shall be undertaken in equipment and rooms appropriate for the purpose, for example, water thawing and air thawing.
- Processing of high risk food shall be conducted under controlled conditions.
- Specialty foods shall be processed under controlled conditions and Kosher, HALAL, allergenic, organic and GMO statuses maintained.

Transport

- Vehicles used in food contact, handling or processing zones or in cold storage rooms shall be designed and operated so as not to present a food safety hazard.
- Practices applied during loading, transport and unloading of food shall be documented, implemented and designed to maintain appropriate storage conditions and product integrity.
- Foods shall be loaded, transported and unloaded under conditions suitable to prevent cross contamination.
- Vehicles used for transporting food shall be clean, in good repair, suitable for the purpose and free from odours or other conditions that may impact negatively on the product.
- Refrigerated units shall maintain the food at required temperatures and the unit's temperature settings shall be set, checked and recorded before loading with core product temperatures recorded at regular intervals during loading as appropriate.
- Prior to opening the doors the storage temperature settings and operating temperature of the refrigeration unit shall be checked and recorded.
- Core product temperatures shall be recorded at the commencement of unloading and at regular intervals during unloading.

Calibration

- Methods and responsibility shall be documented and implemented for calibrating and re-calibrating measuring, test and inspection equipment used for monitoring activities or demonstrating compliance with customer specifications.
- Equipment shall be calibrated against national or international reference standards and methods or to accuracy appropriate to its use, with evidence to support the calibration reference method applied.

- Calibration shall be performed according to regulatory requirements and/or to the equipment manufacturers recommended schedule.
- Calibration records shall be maintained.

Premises construction / maintenance

- Premises, buildings and equipment shall be located, constructed and designed to facilitate the proper manufacture, handling, storage and delivery of safe, quality food.
- Premises are to be maintained structurally sound and operated in a hygienic manner.
- Controls exist for:
 - premises location
 - construction and operational approval
 - materials and surfaces
 - floors, drains and waste traps
 - walls, partitions, doors and ceilings
 - stairs, catwalks and platforms
 - lighting and light fittings
 - dust, fly and vermin proofing
 - ventilation
 - hand washing facilities
 - grounds and roadways
- Exclusions to building and equipment construction and design requirements or alternative methods of control are permitted however they are to be supported by a detailed risk analysis outlining the basis for any exclusion or alternative control measure to demonstrate food safety and quality is not compromised.
- Personnel access doors shall be provided and fitted with a self-closing device.
- Methods, responsibility and schedule for the maintenance and repair of plant, equipment and buildings shall be documented, planned and carried out in a manner that minimises the risk of product, packaging or equipment contamination with records kept.
- Failures of plant and equipment shall be documented, reviewed and their repair incorporated into the maintenance control schedule.
- Facility supervisors are notified when maintenance or repairs are to be undertaken in any food handling area to enable clean-up of the area to occur and ensure maintenance and repairs do not pose a potential threat to product safety.
- Equipment located over product or product conveyors shall be lubricated with food grade lubricants.
- Non-toxic paint shall be used in a food handling or contact zone and not on any product contact surface.

Control of plant and equipment

- Equipment and utensils shall be designed, constructed, installed, operated and maintained so as not to pose a contamination threat to product.
- Benches, tables, conveyors, mixers, minces, graders and other mechanical processing equipment shall be easily dismantled for cleaning and located so as not pose a hindrance to the cleaning of the premises.
- Equipment surfaces shall be smooth, impervious and free from cracks or crevices.
- Product containers, tubs, bins for edible and inedible material shall be constructed of materials that are non-toxic, smooth, impervious and readily cleaned. Bins used for inedible material shall be clearly identified.
- Waste and overflow water from tubs, tanks and other equipment shall be discharged direct to the floor drainage system.
- Water treatment methods, equipment and materials shall be designed, installed and operated to ensure water receives an effective treatment.

Cleaning schedule / sanitisation

- Provision shall be made for the effective cleaning of processing equipment, utensils and protective clothing.
- Suitably equipped areas shall be designated for cleaning product containers, knives, cutting boards and other utensils and for cleaning protective clothing.
- Supplies of hot and cold water shall be provided as required to enable the effective cleaning of the premises and equipment.
- Potable water shall be provided for cleaning the premises and equipment.
- Cleaning and sanitation of product contact surfaces between line changeovers shall be effective and sufficient to remove all potential allergens from product contact surfaces, including aerosols, to prevent cross contamination.
- The methods and responsibility for the cleaning of the food handling and processing environment, storage areas, staff amenities and toilet facilities shall be documented and implemented. Consideration shall be given to:
 - evaluating the effectiveness of cleaning.
 - pre-operational hygiene inspections.
 - verifying the effectiveness of cleaning.
- Detergents and sanitisers shall be purchased in accordance with applicable legislation.
- Material Safety Data Sheets (MSDS) shall be current and available.

Pest control

- All external windows, ventilation openings, doors and other openings shall be effectively sealed when closed and proofed against dust, vermin and flies.
- Personnel access doors shall be effectively fly-proofed.
- External doors used for product access shall be fly-proofed.
- Electric insect control devices, pheromone or other traps and baits shall be located so as not to present a contamination risk to product, packaging, containers or processing equipment.
- Fans and exhaust vents shall be fly-proofed.
- The premises, its surrounds, storage facilities, machinery and equipment shall be kept free of waste or accumulated debris so as not to attract pests and vermin.
- The pest and vermin management program shall:
 - list the chemicals used.
 - include Material Safety Data Sheets (MSDS).
 - outline that inspections for pest activity are undertaken on a regular basis by trained personnel with appropriate action taken if pests are present.
- Records of all pest control applications shall be maintained.
- Pest control contractors shall:
 - be licensed and approved by the local relevant authority.
 - use only trained and qualified operators who comply with regulatory requirements.
 - use only approved chemicals.
 - provide a pest control management plan which will include a site map indicating the location of bait stations and traps.
 - report to a responsible Senior Manager on entering the premises and after the completion of inspections or treatments.
 - provide a written report of their findings and the inspections and treatments applied.

Product recall

- A procedure is to be documented and implemented outlining Senior Management responsibility and methods used to withdraw or recall product

- Investigation to determine the cause of a withdrawal or recall, details of investigations and any action taken as a result of an investigation shall be documented.
- The product withdrawal and recall system shall be reviewed, tested and verified at least annually.
- Records of all product withdrawals and recalls shall be maintained.
- Mock recall to be undertaken at least annually.

Product identification and traceability

- The methods and responsibility for identifying and tracing product during all stages of production and storage shall be documented and implemented.
- Finished product is labelled to the customer specification and/or regulatory requirements.
- Product identification records shall be maintained.
- Traceability to be maintained where product is reworked
- Records of product dispatch and destination shall be maintained.
- Re-working of product containing allergen causing agents shall be conducted under conditions that ensure product safety and integrity is maintained. Re-worked product containing allergen-causing agents shall be clearly identified and traceable.

Personnel hygiene

- Both the employer and employee are responsible for ensuring only healthy personnel, visitors and contractors are engaged in food handling activities.
- All visitors, including management and maintenance staff, shall adhere to personnel hygiene requirements.
- Where appropriate, personnel, visitors and contractors may be required to complete a health questionnaire and a medical screening test before appointment.
- Controls exist for:
 - cuts and lesions.
 - smoking, chewing, eating, drinking or spitting.
 - hand washing.
 - fingernail polish and fake fingernails.
 - jewellery and other loose objects.
 - protective clothing e.g. gloves, aprons.
- Clothing worn by staff engaged in handling food shall be maintained, stored, laundered and worn so as not to present a contamination risk to product.
- Clothing shall be clean at the commencement of each shift and maintained in a serviceable condition.
- Specific criteria for staff engaged in food handling and processing operations.

Training

- Appropriate training shall be provided for:
 - personnel carrying out the tasks critical to the effective implementation of the SQF 2000 System and the maintenance of food safety and quality.
 - Good Manufacturing Practices and pre-requisite programs.
 - food regulatory requirements.
 - critical steps identified by the hazard analysis.
 - HACCP.
 - internal audits.
 - quarantine and release requirements applicable to equipment or product placed under quarantine status.
- Training materials and the delivery of training shall be provided in language understood by staff.
- An employee training program shall be documented and implemented.

- The training program shall include provision for identifying and implementing refresher training.
- A training skills register describing who has been trained in relevant skills shall be maintained.

Control of use of chemicals

- Controls must be in place for storage, reuse, handling and disposal of unused pest control chemicals.
- A program, including methods and responsibility, of integrated pest management shall be documented and implemented.
- Pesticides and other toxic chemicals shall be clearly labelled, handled and applied by properly trained personnel.
- Pesticides and other toxic chemicals shall be used by or under the direct supervision of trained personnel with a thorough understanding of the hazards involved, including the potential for the contamination of food and food contact surfaces.

Woolworths Quality Assurance – Primary Production Produce – Version 7 January 2011

General information

Originally called Woolworths Vendor Quality Management System (WVQMS), Woolworths has been continuously reviewing and updating its Quality Assurance initiatives over the last 15 years.

Vendors supplying Woolworths Ltd are expected to maintain certification to the WQA Standard to provide Woolworths Ltd with confidence in its supply chain, protecting their customers trust in Woolworths brand and product.

The Woolworths program is only available to a Vendor by an invitation from Woolworths Ltd. The certification is site and product specific, with the vendor being responsible of informing Woolworths of any change in business circumstances.

Where a vendor wishes to supply a line to Woolworths which is outside the current scope of their WQA certificate, a request is directed to the relevant Business Team.

The WQA Standard is publically available via the Woolworths Vendor website. A number of guidance documents have also been provided to assist producers understand particular elements of the standard. Previously Woolworths had a generic set of requirements to cover all food, with an additional set of requirements specific to the commodity or type of product concerned (e.g. produce, eggs, manufactured foods). In Version 7, each product has its own standard.

Woolworths Quality Assurance (WQA) Standard Primary Production Produce (Version 7) has recently been released and represents further benchmarking of the WQA Standard against global food safety standards and international retailing best practice, and includes Woolworths Ethical Sourcing Policy audit requirements.

The WQA standard includes the following elements:

- WQA Produce Scope and Certification
- Process Control
- Finished Product, Specifications and Packaging
- Product Identification and Traceability
- Approved Supplier Program
- Document Control
- Good Manufacturing Practice (GMP)
- Cleaning Procedures
- Pest Prevention
- Calibration
- Verification
- Training
- Corrective Action
- Evidence of Commitment to Continuous Improvement
- Customer Focus
- Product Claim Validation
- Ground, Water and Crop Management
- Corporate / National Business

Applicability across the supply chain

The scope of the WQA Product Standard includes all Woolworths Branded Produce, pre packed produce and bulk produce from planting, growing and harvesting, to procurement, packers and processors.

All suppliers of Woolworths branded produce, whether direct or indirect, local or international, must be WQA certified. Brokers associated with the named product categories are required to be audited against relevant elements of the standard within the scope of their business.

Uptake of the scheme within the sector

Woolworths had not provided a response at time of report.

Auditing

Certification Body requirements

Woolworths did not wish to release this information.

Appendix 1 of the WQA Standard explains that Woolworths has nominated an agreed list of Certification Bodies based on Woolworths' ability to administer accreditation checks and maintenance. The Vendor is able to select their preferred Certification Body from this agreed list.

Auditor requirements

Woolworths did not wish to release this information.

Audit frequency

Six monthly, unless Woolworths grants an exemption e.g. a vegetable pack house that only operates for part of the year may be permitted to have audits on an annual basis.

Audit timing

Woolworths advised that these details are outlined in directions to auditors.

Manner of dealing with corrective actions

The auditor recommends to Woolworths whether or not certification should be granted. Audit non-conformances are graded according to critical, major, minor or seasonal

Critical non-conformance

Immediate suspension of business until CAR is satisfactorily actioned. These may be raised where the auditor finds:

- Safety of the product is found to be at risk such that the products potentially fall within class I (potentially life-threatening, could cause a serious risk to health) or class II recall categories (when product defects could cause illness).
- Where the product or processes are found to contravene regulatory requirements.
- Where product specifications are not being met leading to substandard product being supplied to Woolworths.

Woolworths will be advised of Critical non-conformances immediately by the auditor. This will result in the immediate suspension of trade. The auditor, in conjunction with the Vendor, shall ensure that all critical non-conformances are closed out prior to the recommencement of supply to Woolworths.

Major non-conformance

These non-conformances may be raised where the auditor finds:

- The Vendor does not meet Good Manufacturing Practices requirements.
- The HACCP Plans have not been fully documented in accordance with the Codex seven principles or that the HACCP Plans have not been effectively implemented.
- Where a support program has not been documented or has not been implemented.
- Where a product or process has been introduced which differs significantly from those initially verified.
- Where product is not being assessed adequately against specification.
- Where process control plans major non-compliance issues.

Woolworths will be advised of any Major non-conformances. The auditor in conjunction with the Vendor shall ensure that all Major non-conformances are closed out within 14 days of the audit date unless otherwise agreed in writing by Woolworths.

Minor non-conformance

The auditor may identify instances of Minor non-conformances where:

- Observed practices do not comply with procedures but are not affecting product safety or quality.
- Where improvements or modifications addressing requirements of the WQA elements may be required.

Minor CARs shall be closed out by the Vendor and the auditor within 30 days of issue.

Seasonal non-conformance

The auditor may identify instances of non-conformances for some product lines, which cannot be closed out prior to the commencement of a new season. These will be issued as a Seasonal Non Conformance and the Vendor will be required to close the CAR within 14 days of the commencement of the season. The Vendor cannot supply the particular line to Woolworths unless the Seasonal Non Conformance has been closed out.

Where critical non-conformances are identified during an audit or where major non-conformances are not rectified within 14 days of an audit, certification may be suspended or terminated. Minor non-conformances are to be rectified within 30 days of being issued.

How microbiological hazards are addressed

- Implementation of a microbiological testing program in line with the product specification and known product issues e.g. identified in HACCP plan.
- All products shall meet the microbiological criteria prescribed for the product in the country of production and sale to the end of shelf life.
- Frequency of testing is determined via risk assessment (a minimum annual testing regime is required). This risk assessment shall include consideration of the following:
 - nature of product (including inputs, storage requirements etc.).
 - intended use of the product (ready to eat etc.).
 - process.
 - facility capability.
 - Volume.
 - frequency of production.
- Product managed by a market wholesaler / packer / brokerage arrangement will verify effective chemical, physical and microbiological compliance through information gathered from their suppliers provided that, the market wholesaler / packer / brokerage also has a percentage of product checked, at random, based on risk and volume.
- High Risk products include but not limited to:

- Mushrooms.
- Sprouts and Shoots (including micro herbs etc.).
- Berries.
- Herbs.
- A microbiological testing program is in place for all high risk products which is inclusive of the minimum requirements listed below. Where product is known to support the growth of other organisms they shall also be tested as part of the verification program to demonstrate product safety and quality throughout shelf life. Examples of other testing may include yeasts and moulds etc.
- Where positive *Listeria* species is detected in any product intended for Woolworths supply, this shall be reported to Woolworths QA Department.

	Maximum Limits
<i>Escherichia coli</i>	< 10 cfu/g
Thermotolerant Coliforms	< 100 cfu/g
<i>Listeria monocytogenes</i>	< 10 cfu/g
Coagulase positive Staphylococci	< 100 cfu/g
<i>Salmonella</i>	Not Detected in 25g

Regulatory requirements

- Woolworths requires that Trade Partners comply with their legal obligations in all respects. This is a condition of supply. This WQA Standard is not intended to operate as a substitute for the Trade Partner ensuring compliance with all statutory and regulatory product safety, compositional and labelling requirements.
- All products and services supplied to Woolworths Limited must meet the current regulations both in the country / state of origin and the country / state where the product is sold.
- By providing the WQA Standard, Woolworths does not release the Trade Partner from its obligations to comply, in all respects with those statutory requirements.
- All finished product dispatched to Woolworths shall comply with all laws and regulations in the country of sale (and productions if required).
- Hazard analysis is required to include regulatory issues.
- Product specifications, packaging, labelling, document control requirements:
 - Compliance with FSANZ Food Standards Code.
 - Compliance with ACCC requirements.
 - Compliance with Trade Weights and Measures legislation.
 - Compliance with APVMA requirements.
- Disposal of lubricants must comply with regulations.
- Woolworths has provided a document on its website providing producers with guidelines on how to identify regulatory, legislative, Code of Practice requirements and reference guides.

HACCP plan

- Vendors supplying food products/processes to Woolworths shall develop, document and implement a HACCP Plan or Plans which will:
 - Identify potential hazards to food safety, quality criteria and regulatory criteria.
 - Put in place sufficient control measures to identify and reduce the hazards to a safe level or eliminate the hazards.
- Preliminary steps shall cover:
 - HACCP Team.
 - Scope.

- Purpose.
- Product description and intended use.
- Flow chart (outlining all major steps in the process, including inputs) verified by the HACCP team to ensure its accuracy.
- Documentation covering the seven principles of HACCP:
 - conduct a hazard analysis (document and identify all potential biological, physical, chemical, quality hazards and regulatory issues including allergens).
 - determine the critical control points.
 - establish critical limit(s) (validation data shall be maintained).
 - establish a system to monitor control of the CCP and QCP (procedures for monitoring critical limits shall be developed, documented, implemented and reviewed).
 - establish the corrective action (procedure to include disposal of any affected product).
 - verification – including microbiological and chemical testing, shelf life validations, physical assessments, reviewing monitoring records, reviewing corrective action records, reviewing customer complaints, internal audits.
 - establish documentation concerning all procedures and records appropriate to these principles and their application.
- In addition to the Codex principles and guidelines, the vendor shall:
 - Establish HACCP plan reviews – annually or when any changes occur.
 - Obtain raw material specifications, including packaging materials.
 - Document and implement a product design and development procedure for Woolworths Branded Product including:
 - HACCP.
 - production trials.
 - specifications / labelling.
 - shelf life establishment in final packaging.
 - verification.
 - approval by Woolworths Ltd of product / claims prior to market launch.

Generic HACCP plan used in the development of the system

- Not specified.

Approved suppliers

- Where the HACCP Plan or risk assessment has identified that a purchased input could be a source of a safety or quality hazard, an Approved Supplier Program shall be developed, documented and implemented to control the hazard.
 - Purchased inputs shall include, but not be limited to:
 - ingredients, raw materials, processing aids, ice, water, seedlings, agricultural and cleaning chemicals and packaging materials.
 - services.
 - finished product in the case of a distributor or managed by a brokerage arrangement.
- The process for approval and removal of a supplier shall be documented and implemented, addressing the following:
 - Risk assessment of suppliers and their products or services (i.e. volume and safety).
 - Methods for selection and ongoing approval of suppliers.

- Methods for approval of “emergency suppliers” and the circumstances in which these are permitted.
- Methods for technical review of raw material, finished specifications or the service contract.
- Maintenance of a list of suppliers and their status.
- Ongoing supplier performance monitoring is required.
- For produce vendors sourcing product from growers, wholesalers, brokers and importers evidence of supplier 3rd party certified quality assurance program must be provided. Examples of acceptable certification includes Freshcare (3rd Edition), SQF1000 (Level 3), SQF2000 (Level 3), WQA, HACCP, GlobalG.A.P, NZ GAP and BRC. This must demonstrate certification all the way back to grower. Woolworths may require some approved suppliers to undertake WQA certification.

Control of inputs

- Incoming purchase inputs are to be monitored and evaluated against specification.
- Corrective actions are documented when incoming goods or services do not meet specification.
- Temperatures of all potentially hazardous food products shall be recorded at receipt.
- Inputs are outlined in flow chart and assessed for food safety and quality risks in HACCP plan.
- Specific requirements are outlined for:
 - Packaging.
 - Labelling.
 - Gas mix used for modified atmosphere.
 - Lubricants.
 - Liners.
 - Steam.
 - Water.
 - Ice.
 - Air / compressed air / gas.
 - Allergen assessment on incoming raw materials.
 - Plant material.
 - Crop applications e.g. chemicals, fertiliser, biological controls, waxes, biocides.

Good Manufacturing Practices (GMP)

- Good Manufacturing Practice (GMP) procedures and policies shall be developed, documented and implemented proportional to the risk of the product supplied to Woolworths.
- Procedures/policies shall be implemented and include:
 - Aspects relating to personnel, premises, surrounds, equipment, services, and inputs which may impact on the safety and quality of the produce or product being grown, harvested, processed, packed, stored or transported to Woolworths.
 - Methods for verifying compliance and adherence to each policy or procedure and records of verification shall be maintained.
- Aspects of the points in this section that are not implemented must be supported by a risk assessment detailing reasons for exclusion.
- Specific policy coverage within GMP not addressed elsewhere includes:
 - Staff facilities
 - Staff movement
 - Visitors and contractors
 - Use of signs
 - Laboratories
 - Equipment

- Waste, re-work and work-in-progress
- Dropped product
- Foreign object contamination
- Glass / glass-like materials / ceramics and hard brittle plastics
- Soft plastics
- Wood
- Metal
- Stock rotation
- Chemical and physical cross contamination
- Allergen management
- Product trade measurement

Good Agricultural Practices (GAP)

- Processors and distributors site boundaries shall be clearly defined, cleared from potential to harbour pests, and adequate drainage shall be in place.
- Policies and procedures shall be implemented and include consideration in relation to risk to product safety and quality, of the following:
 - Agricultural production and raw sewerage flow into irrigation water sources.
 - Previous use of land including chemical applications.
 - All sites shall be assessed for environmental pollutants and likelihood of flooding.
 - Maintenance of the external site surrounds, including driveways and foliage areas.
 - The use of skips, waste bins and external waste storage areas.
- A risk assessment shall be undertaken on new or existing sites where the risks have changed.
- Untreated sewage, human effluent, or biosolids shall not be applied to growing sites or potential growing sites through irrigation, soil preparation etc.
- Reduce risk of contamination of growing area where possible.
- Raw sewerage flow into irrigation water sources shall be controlled.
- Equipment used to irrigate (or fertilise etc.).
- Water used in hydroponics and indoor systems shall be regularly monitored, and / or changed.
- Water management plans shall be implemented.
- Each used water source shall be tested based on a risk assessment which includes temporary contamination situations where applicable (i.e. severe storms, flooding) and shall take the characteristics of the crop into account and meet the following guidelines:
 - All water sources are monitored and maintained.
 - Product that contacts flood water / other contaminations shall not be harvested for sale unless it can be demonstrated the product is fit for human consumption.
 - Written authority from the relevant authority to harvest water.
- Plant material inspected prior to planting.
- Ensure all applications applied to the crop / soil (pre and postharvest) are suitable.

Control of storage

- Plant and equipment should not be stored externally. If this is necessary the site is required to demonstrate how the storage area is effectively managed.
- Adequate locker/storage facilities for personal effects.
- Outdoor clothing to be stored separately from protective clothing.
- Facilities for storage of personal food shall be available e.g. lunches.
- Flammable materials to be stored in secure areas, properly enclosed and adequately ventilated.

- Chemicals to be stored in a secure area.
- Work in progress, material out-of-spec, waste or by-product or used packaging materials resulting from the process shall be clearly identified and segregated for storage and/or disposal, properly stored and frequently removed.
- Waste storage capacity on site shall be suitable and sufficient for all materials in between collection from site.
- Pest control shall be in place in waste storage areas.
- Allergens to be taken into account.
- All equipment used for storage of raw materials shall be suitable for the purpose, maintained in good repair and in a clean and hygienic condition.
- Storage equipment used shall be suitable for purpose.
- Refrigeration units are provided for storage of refrigerated foods.
- Cleaning equipment and chemicals to be segregated from food production areas.
- Storage of calibration equipment to be suitable.
- Retention samples shall be retained for the shelf life of the product under recommended storage conditions.
- Crop applications to be stored in appropriate categories where applicable.
- All third party transport contractors shall be approved within the approved supplier program.
- Flammable materials shall be stored in secure areas, properly enclosed and adequately ventilated.

Control of processing / preparation / handling

- Raw materials and finished product to be used on a first in first out basis.
- Potable water is to be available for postharvest wash treatments, hand washing and cleaning.
- Water used for cleaning and as an ingredient shall be tested for contamination at least annually.
- Water storage to be regularly inspected and/or monitored.
- Procedure for waste, re-work and work-in-progress to be documented and implemented.
- Dropped product policy to be documented and implemented.
- Prevention of foreign object contamination e.g. glass, plastic, metal, wood.
- Allergen management procedures to be developed.
- Procedure for prevention of cross contamination to be developed and implemented.
- Product to comply with Trade, Weights and Measures.
- Chemical and physical testing program to be developed as required.
- Product claims to be verified and validated.

Transport

- All equipment used for transportation shall be suitable for the purpose, maintained in good repair (records kept) and in a clean and hygienic condition.
- Refrigeration units to be in good repair, able to maintain product at required temperature when at maximum capacity and calibrated.
- Procedures for securing transport of finished product minimising the risk of cross contamination, ensuring product temperature requirements are met are to be documented with records kept as required.
- All incidents of vehicle or refrigeration equipment breakdown shall be recorded and corrective action documented, including the outcome of the product on the load.
- Traceability records shall be maintained throughout the storage and delivery process until receipt at Woolworths.

Calibration

- A procedure shall be developed, documented and implement to ensure all equipment used to inspect, measure or test the product or process is identified and reading accurately at the time of use, including but not limited to the following:
 - Thermometers.
 - Temperature gauges.
 - Scales and balances.
 - Temperature controllers/recorders.
 - Metal and foreign object detectors.
 - Ph meters.
 - Chlorine measuring equipment.
 - Colour measuring equipment.
 - Pressure sensors.
 - Heat sensors.
 - Chemical application equipment.
 - Water monitoring equipment.
 - Reference weights.
 - Refractometers.
- Testing and calibration of metal or foreign body detectors shall be carried out at a regular nominated frequency with records kept. Procedures shall be documented to specify corrective action in the event of a detection or machine failure, including identification and isolation/quarantine of all product produced since the last acceptable test of the metal/foreign body detector, and release of that product.
- Recognised methods and frequency for calibration and calibration checking is to be based on volume of product produced.
- Equipment used to inspect, measure or test the product is to operate with an acceptable degree of accuracy and identified when found to be out of calibration.
- Methods for identification and review of product produced whilst equipment has been out of calibration.
- Records maintained for calibrations, calibration checks, corrective actions taken when equipment is found to be out of calibration, and who is responsible for each activity.

Premises construction/maintenance

- Premises construction and layout element requires the vendor to consider the following:
 - Management of available space for the activities on site.
 - Segregation of high and low risk areas of production.
 - Design and construction to minimise accumulation of dirt, debris and pests.
 - Walls, floors and ceilings shall be impervious, sealed and easily cleaned and maintained.
 - Adequate drainage for the site's activities.
 - Lights shall be covered wherever they could shatter and impact on food safety.
 - Adequate lighting shall be provided for clear working visibility.
 - Windows, doors, walls and other openings linked to storage and production areas shall be close fitting and in good condition to control dust and pests.
 - Adequate ventilation and/or extraction.
 - Extraction and refrigeration units (where used) shall be clean and effective.
 - All process and storage areas from receivals to dispatch should be considered with regard to minimising potential for product contamination.
 - Chemicals (including fertilisers) used on site shall be identified, controlled and stored in a secure area.
 - Chemicals in use in production areas shall be controlled at all times.
 - MSDS (material safety data sheets) shall be available.

- All incoming service lines such as gas, electricity, hot and cold water shall be adequately protected and clearly identified. A map of service distribution on site shall be available.
- The quality of water, steam, ice, air, compressed air or gas which comes into contact with food or packaging, which in itself does not constitute an ingredient, shall be regularly monitored and shown to present no risk to product safety, quality or legality.
- One way flow for a producer of potentially hazardous foods to be operational or other methods of control should be in place.
- Air should be filtered where necessary and pressure differentials should be in place between high and low risk production areas for potentially hazardous foods.
- A planned and implemented preventive maintenance program for all food process plant, equipment, premises and surrounds, taking into account:
 - Those undertaking maintenance must adhere to company hygiene, clothing and staff movement procedures.
 - Use of temporary screening structures during building works / equipment maintenance.
 - Ensure tools, equipment, and materials used or by-products of maintenance are identified and removed prior to recommencement including a physical count.
 - Cleaning shall be carried out post-maintenance unless it can be demonstrated as no risk to product.
 - Temporary (tape) engineering repairs shall not affect product safety, quality or legality and its use shall be promptly documented and rectified with permanent solutions.
 - Machinery lubricants shall be approved for food use in the country of sale unless the lubricant or its application can be demonstrated as no risk to product.
 - Maintenance workshops and engineering stores shall be controlled, clean and pest proofed.
 - Maintenance staff and contractor's tools and tool boxes shall be clean and controlled.
 - Maintenance debris, waste and surplus parts shall be controlled.
- Filters, magnets or sieves used in the process shall be regularly inspected
 - Documented maintenance procedures shall be in place for all modes of transport.

Control of plant and equipment

- Equipment used to prepare, process, pack and cool product shall be suitable for use, designed and sited for ease of cleaning, maintained in good condition, part of a preventive maintenance plan and specified before purchase, commissioned after delivery and validated before commercial use.
- Equipment in direct contact with processed food products shall be constructed of stainless steel or other smooth, impervious and cleanable materials appropriate and approved for use with food.

Cleaning schedule / sanitisation

- Procedures shall be developed, documented and implemented for the cleaning of all processing and cleaning equipment, utensils, product contact surfaces, strip and air curtains, door seals, cool rooms, walls, floors, ceilings, storage areas, amenities and transport vehicles for all produce and as appropriate depending upon the nature of other products.

- Records of monitoring, corrective actions and verification activities shall be maintained.
- Cleaning shall be completed after building work and maintenance activities, between batches where applicable
- The procedures for both microbiological and chemical (including allergen cleaning) shall include:
 - Schedule of cleaning identifying what is to be cleaned, methods for cleaning, any chemicals used and its strength, any equipment used, the frequency of cleaning and who is responsible for the cleaning activity.
 - Schedule for monitoring cleaning effectiveness.
 - Pre-operational hygiene inspections.
 - Corrective actions where cleaning is found not to be effective.
 - Schedule of verifying the effectiveness of the cleaning program, where applicable.
 - Use of food-approved cleaning chemicals in food processing premises
 - Sanitiser rotation where applicable.
 - Schedule for high risk operations of verifying the effectiveness of the cleaning program, where applicable.
 - CIP operations shall be established, validated and verified using the same principles as manual cleaning methods (above).
 - Equipment and cleaning chemicals used shall be clearly identified and segregated from food production areas, where applicable.
 - Steel wool (including cleaning pads) or wire brushes shall not be permitted.
 - Where coloured scouring pads are used to assist with manual cleaning, procedures shall be in place to prevent product contamination.
 - Cleaning equipment such as brushes or water hoses shall be replaced on signs of wear or damage.
 - Use of hot water.
 - Current MSDS for all cleaning chemicals shall be obtained and maintained on site at all times.
 - Records of chemical usage and traceability shall be maintained, including type of chemical, application rate and location used.
 - Procedures for removal of “pooled water” on floors and flat surfaces of equipment.
 - Utensils and equipment which are “wet cleaned” shall be air dried to prevent cross contamination.
 - Raw, in process and completed product shall be protected at all times during cleaning and sanitisation processes.
 - Quality of water.
 - Staff facilities shall be maintained in a clean condition.

Pest control

- Procedures for the prevention and control of insects, rodents, birds and other pest infestation in and around all production and distribution facilities for food products and for other products as appropriate depending on the nature of the other products to be developed, documented and implemented including:
 - Pest control chemicals and equipment application schedule.
 - Schedule for monitoring the effectiveness of the pest control program
 - Corrective action procedures where the program is found to be not effective.
 - Records of applications, monitoring and corrective actions shall be maintained.
 - Current Material Safety Data Sheets (MSDS) outlining proof of suitability for use within a food production environment.
 - Contractor credentials.

- Bait map shall be provided depicting the type of control and the area it is being applied.
- Pest control baits and equipment (such as electric fly killers) shall not be placed in any areas where food could become contaminated and shall be secured to prevent tampering.

Product recall

- An appropriate product withdrawal/recall procedure for all products outside the control of the consumer and supplied to Woolworths Limited.
- This documented procedure shall:
 - reflect the procedure for each Woolworth's division to which products are supplied
 - require communication to Woolworths of any quality/safety/regulatory issues which may lead to a product withdrawal/recall and advise Woolworths within 60 minutes of the decision to withdraw / recall
 - differentiate procedures between a withdrawal and a recall
 - outline an annual mock recall procedure undertaken on a product supplied to Woolworths - internal only and Woolworths shall not be contacted, with records kept of these mock recalls
- Records shall document who was contacted, what the problem was, who acted upon it and how it was resolved.
- Woolworths QA to be notified if any other product or like product, which is supplied by the Vendor, but is not supplied to Woolworths is affected by a recall.

Product identification and traceability

- All materials used in, or produced by, production processes are to be clearly identified as to grade, inspection status and description.
- Materials used in, or produced by, production processes may include but not limited to:
 - Raw materials and ingredients
 - Finished products
 - Work in progress
 - Rework
 - Waste materials
 - Non-conforming product
 - Cleaning, pest prevention, or agricultural chemicals
 - Other materials e.g. gases
- A procedure to ensure traceability is to be developed and include:
 - Labelling of bulk loose product, Woolworths branded prepack lines, prepack lines, imported product, produce crates and produce pallets to include as relevant:
 - Name and Address of the grower / packer
 - Date marking
 - Country of origin of the product
 - Product Name on outer packaging
 - Item Number/ TU / Order Multiple
 - Batch code (if applicable) on inner and outer packaging
 - Lot Code
 - Name of Importer
- All labelling shall be legible.
- All Woolworths' branded and proprietary branded products shall be labelled in accordance with the requirements of the relevant country of sales food and labelling requirements.

- A procedure for preparing and reviewing labels shall be documented and implemented, covering where applicable:
 - checking product labels comply fully with the relevant regulatory, industry and recognised code of practices and any other relevant requirements
 - checking Woolworths branded product labels comply with specifications
- Only Woolworths approved labels/packaging shall be used with Woolworths product.

Personnel hygiene

- Staff hygiene policy are to be implemented and communicated with management, employees, visitors and contractors, and address the following as relevant:
 - Rules for eating, drinking and smoking in production areas.
 - Eating, drinking and smoking whilst wearing food handling protective clothing.
 - Protective clothing worn in production areas, including footwear.
 - Protective clothing required for outdoor jobs should be specific to that use.
 - Spitting, hand washing, use of sanitisers.
 - Acceptable wearing of jewellery.
 - Aftershave, perfume and cosmetics including nail polish and false nails
 - Use of detectable plastic strips (adhesive dressings), personal medicines.
 - Use of disposable contrast coloured gloves.
 - Methods of regularly monitoring compliance to the personal hygiene policy. For food handlers this may include glove and / or hand swabbing.
 - Allergens.
 - Personnel infected with a virus or a communicable disease.
 - Cuts, abrasions or other open wounds.
 - Wearing of clothing, footwear, hair coverings, beard snoods, and protective head gear, religious or cultural clothing including headgear.
 - The number of garments required on site to ensure a supply of clean clothing whenever required.
 - Frequency for changing clothing.
 - The segregation of clean protective clothing from used or soiled clothing.
 - Clean footwear should be suitable to the production area and job.
 - Washable footwear and suitable cleaning facilities should be provided where deemed necessary, located appropriately, cleaned regularly and monitored to verify they are not a source of cross contamination. Footwear cleaning facilities shall be used by all personnel at the required frequency.
 - High risk operations.

Training

- All staff undertaking activities, duties or other functions, including supervision, which has an effect on the quality or safety of the product or service, or an activity which is identified as a CCP or QCP, or responsibility for the implementation of support programs are suitably trained.
- Maintenance staff shall be trained in food hygiene as well as job specific skill training.
- A training schedule identifying areas of training required, training course or on-the-job training activity, frequency of training and who is responsible for undertaking the training.
- Training needs of the organisation shall be reviewed at least annually.
- Records of all training activities, verifications and corrective actions shall be maintained.
- Training shall be undertaken in the following as relevant to the employees role and responsibilities:
 - At least one person from the organisation shall attend formal industry recognised HACCP training.
 - Relevant Food Acts e.g. in Victoria, Australia each food business shall provide evidence of training relevant to the Food Safety Supervisor.

- Recognised Government Approved Industry Training in agricultural and chemical applications e.g.: ChemCert, Growsafe (NZ) or equivalent training.
- Legislative issues pertaining to the products destined country of sale i.e. ACCC, Measurement, FSANZ Code and associated legislation etc.
- Induction training for new staff covering Good Agricultural Practices and/or Good Manufacturing Practices.
- Policies, equipment and procedures relating to their job description.
- Cleaning procedures including but not exclusive to: the type of chemical used in applicable cleaning procedures, required dilution for effective cleaning, application procedures and monitoring Internal audits.
- Product Recall/Withdrawal procedures.
- Where a person moves into a new role, training shall be provided proportional to the responsibilities of the new role.
- Refresher training shall occur at a regular frequency as appropriate to the role and responsibility.

Control of use of chemicals

- All applications to be recorded with the following detail:
 - Name of product
 - Identification of site
 - Date of application
 - Dose and treatment method
 - Confirmation product is approved for use
 - Label dosage rate
 - Weather conditions
 - Withholding periods
 - Date of harvest
 - Name and signature of applicator
- Chemicals used to be:
 - Suitable for the pest
 - Disease, weed or target of the intervention and to crop applied
 - Registered for use in the country of application and country of end sale
 - Purchased legally from an accredited supplier
 - Stored and applied according to manufacturer's instructions and regulatory requirements
 - Checked annually to ensure chemical is still usable
 - Stored to prevent contamination of the crop
 - Applied at appropriate frequency
- Withholding period to be adhered to.

Appendix 1 – Horticultural commodity groups contacted

Company	Person
Almond Board of Australia	Ross Skinner CEO
Apple and Pear Australia Limited	Cassia Fergusson
Australian Asparagus Council	Vicki Leng
Avocados Australia Limited	Maree Tyrrell
Australian Banana Growers' Council	
Australian Blueberry Growers Association	
Canning Fruit Growers' Association	
Cherry Growers of Australia	Simon Boughey
Chestnuts Australia Inc	Tania Edwards
Citrus Australia Limited	Simone Corponi
Australian Custard Apple Growers Association	Pattie Stacey
Australian Dried Fruits Association	Phil Chidsley
South Australian Dried Tree Fruits Association	Phil Chidsley
Australian Garlic Industry Association	
Hazelnut Growers of Australian	Darren Baguley
Australian Lychee Growers' Association	
Australian Macadamia Society Limited	
Australian Mango Industry Association	
Australian Melon Association	Leanne McLennon
Australian Mushroom Growers' Association	Sheri LeSeuvre
Australian Nashi Growers' Association Ltd	Colleen Shier
Australian Nut Industry Council Ltd	Chaseley Ross
Australian Olive Association	Lisa Roundtree
Australian Onion Industry Association	
Papaya Australia	
Passionfruit Australia Incorporated	
Australian Pecan Growers Association	
Persimmon Australia	
Growcom	
Pistachio Growers Association	
Ausveg	Andrew White
Potato Processing Association Australia	
Processing Tomato Research Council	Liz Mann
Ausprune	
Australian Rubus Growers Association	Allison Brinson
Strawberries Australia	
Summerfruit Australia Ltd	
Australian Table Grape Association	
Australian Walnut Industry Association	

Appendix 2 – Number of horticultural producers in Australia by commodity

Commodity	Body	No.	Body	No.	Body	No.
Almonds	Almond Board of Australia	156				
Apple and Pear	Australian Bureau of Statistics	545	APAL	600		
Artichokes	AusVeg	34				
Asian Gourds	AusVeg	10				
Asian Vegetables	AusVeg	418				
Asparagus	Australian Asparagus Council	92				
Bananas	ABGC	800				
Beetroot	AusVeg	229				
Blueberry	Australian Blueberry Growers	163				
Broccoli	AusVeg	406				
Brussels sprouts	AusVeg	37				
Butter Beans	AusVeg	182				
Cabbages	AusVeg	386				
Capsicums	AusVeg	478				
Carrots	AusVeg	293				
Cauliflowers	AusVeg	348				
Celery	AusVeg	101				
Cherry	Cherry Growers of Australia	475-500				
Chestnuts	Chestnuts Australia Inc	340	ANIC	140		
Chillies	AusVeg	181				
Citrus Fruit	Australian Bureau of Statistics	916				
Cucumbers	AusVeg	557				
Custard Apple	ACAGA	220				
Dried fruit	Dried Fruits Australia	475-525				
Dried tree fruit	SA Dried Tree Fruit Assoc	100				
Eggplants	AusVeg	249				
Fennel bulb	AusVeg	30				
French / Runner Beans	AusVeg	201				
Fresh tomatoes	AusVeg	821				
Garlic	AusVeg	209				
Garlic	Australian Garlic Industry	40				
Ginger	AusVeg	42				
Hazelnuts	Australian Nut Industry Council	130				
Herbs - other	AusVeg	318				
Herbs - parsley	AusVeg	343				
Leeks	AusVeg	149				
Lettuce Heads	AusVeg	349				
Lettuce loose leaf	AusVeg	268				
Lychee	Australian Lychee Growers	200				
Macadamia	Australian Macadamia Soc	800	ANIC	180		
Mango	Australian Mango Industry	900				

Commodity	Body	No.	Body	No.	Body	No.
Melons - bitter	AusVeg	18				
Melons - honeydews	AusVeg	43				
Melons - other melons	AusVeg	32				
Melons - watermelons	AusVeg	401	Australian Melon Association	180		
Melons -rock / cantaloupe	AusVeg	168	Australian Melon Association	20		
Mushrooms	Australian Bureau of Statistics	76	Australian Mushroom Growers	75	AusVeg	117
Okra	AusVeg	26				
Onions	AusVeg	370				
Parsnips	AusVeg	51				
Passionfruit	Passionfruit Australia Inc	120				
Peas -green	AusVeg	57				
Pecan	Australian Nut Industry Council	60				
Pineapples	Growcom	112				
Pistachios	Australian Nut Industry Council	80				
Potatoes - Processing	AusVeg	716	Potato Processing Association	400		
Potatoes - Fresh Market	Potato Processing Assoc	600-800				
Processing Tomatoes	Processing Tomato Research Council	15				
Prune	Ausprune	90				
Pumpkin	AusVeg	1079				
Radish	AusVeg	154				
Rubus	Australian Rubus Growers	150				
Silverbeet & Spinach	AusVeg	386				
Snake Beans	AusVeg	32				
Snow peas & sugarsnap peas	AusVeg	185				
Spring onions & shallots	AusVeg	180				
Strawberry	Strawberries Australia	420				
Summerfruit	Summerfruit Australia	800				
Swedes & turnips	AusVeg	121				
Sweet corn	AusVeg	166				
Table grapes	Australian Bureau of Statistics	1215	Australian Table Grape Assoc	1100		
Walnuts	ANIC	80				
Zucchini & butter squash	AusVeg	621				
Berry Fruit + Stone Fruit + Olive Growing + Other Fruit and Tree Nut Growing	Australian Bureau of Statistics	4902				
Vegetables	Australian Bureau of Statistics	4279				