Salad Producers Forum – Good Agricultural Practice Project

Harvest FreshCuts Pty Ltd
Rebecca Hall

Project Number: OT06011

OT06011

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Salad Producers Forum – Good Agricultural Practice Project

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OT06011 – Salad Producers Forum – Good Agricultural Practice Project

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Report Purpose Statement

The purpose of this report is to collate and examine all the information gathered over the life of this project and provide industry with insights into the development of an industry "best practice" for agricultural production and supply, to ensure the safety and quality of freshcut salads. The project focussed primarily on the supply base providing freshcut leafy salads to the forum members, and included Harvest Freshcuts Pty Ltd, Mrs Crockets, SaladFresh, J Mark Pty Ltd and Houston's Farm.

Acknowledgments

Funding for this project was provided by Horticulture Australia Ltd and the Fresh Salad Producers Forum Group. Jane Lovell from Tasmanian Quality Assured Inc was also a significant supporter to this project. The contributions made by these organisations and their staff are gratefully acknowledged.

Date of Report : 3rd November 2010

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Media Summary

The key components of the project

Salad GAP (Salad Good Agricultural Practices) was an initiative of the Fresh Salad Producers' Forum, which was formed in Dec 2006 with support from HAL, with the objective of collaborating and sharing information and ideas about how to improve the food safety and quality processes and procedures of the fresh-cut salad processing industry .

The Salad GAP project commenced with an initial review of the quality assurance systems currently operating in the industry, both within Australia and overseas, followed by a Good Agricultural Practice analysis of the Forum members' grower supply bases. The purpose of this was to determine the current standards of operation compared to the level of control that the Forum believed was necessary to reduce food safety risks and provide better protection for industry and consumers. After consultation with industry the Forum collaborated to develop a Good Agricultural Practice Standard specifically for fresh-cuts primary producers and this was implemented within the Forum members'supply bases.

What is the industry significance of the project?

Salad GAP is a set of Good Agricultural Practices designed to minimise the risk of food safety hazards during the growing and transportation of field grown salad vegetables. The completed Standard has the substance and structure to elevate the effectiveness of food safety controls in the field, providing enhanced risk control and ultimately safer product for the Australian consumer. The Standard further provides some valuable tools and educational aids to better inform the grower of the risks involved and strategies about how to negate them.

Key outcomes & conclusions

Through collaboration, the Freshcut Salad Producers Forum has developed a unified approach towards the essential non-competitive issue of food safety.
It was evident that a number of the pre-existing quality assurance standards adopted by the grower base at the well intentioned request of the supply chain failed to encompass all of the areas of control required for good risk management in fresh-cut salads manufacture. Compliance with SaladGAP has enabled salad growers to demonstrate "best practice" to a range of key stakeholders, including salad processors and retailers. The implementation of the practices identified in these guidelines has the capability to protect the integrity of the salads' market and will create positive flow on effects for the entire fresh-cuts and salad growing industry.

Recommendations for future R&D

Use this foundation to drive the entire fresh-cut produce industry quality assurance standards.

Recommendations for practical application to industry

This Quality Assurance Standard has been formally adopted across the grower supply base of all Forum members.

SaladGAP Version 1 has been published and the development of Version 2 is in progress following feedback from growers and auditors. The guardianship and administration of SaladGAP has subsequently been moved to Freshcare.

Technical Summary

The nature of the problem

In 2006, an outbreak of E.coli traced back to Fresh-cut Spinach occurred in the United States killing three people As this investigation progressed and it became evident that causal factors were likely to be run off water from neighbouring paddocks containing livestock, the question was raised by a group of the key fresh-cut salad manufacturers whether a similar incident could happen in Australia. In the knowledge that the fresh-cut salad process did not allow for a pathogen eradication step such as cooking or pasteurisation, were the primary producer and processing facility controls robust enough? What else could be done to tighten the controls between paddock to plate? Although there had been no significant food safety outbreaks relating to leafy green produce in Australia at the time the scientific risks remain the same and there had been food poisoning outbreaks on other produce items such as oranges and rockmelons in Australia.

It was agreed that the most effective approach would be to ensure that good agricultural practices were enforced every day and that it would be beneficial for businesses with like minded goals to work together to assure the integrity of fresh-cut products.

Working from the experience of existing Australian quality assurance standards for primary producers in operation in 2007 , it was perceived that these standards were numerous but relatively generic in nature. They had been designed to cover a broad range of commodities, in relation to food safety controls. Therefore, the aim of the project was to build on the existing standards in order to provide improved controls specific to the fresh-cut salads supply chain where this was warranted.

Brief description of the science undertaken

A review was undertaken of the existing quality assurance standards in operation, both domestically and internationally. This was followed by the analysis of a sample of the current Freshcut Forum members' supplier base to determine the level of understanding of the operative quality assurance systems and to identify the gaps between current practice and the ideal levels of control. A Standard was developed using industry scientific research. This Standard was then implemented within the Freshcuts Salad Producers Forum supply base and 3rd Party Auditing organisations. The maintenance of this ongoing Standard was then handed over to Freshcare.

The published Standard is designed as an additional set of requirements to the existing standards such as Freshcare and SQF1000. An additional objective was to make the Standard user friendly (i.e. to provide an educational base and tools to assist in on-farm decision making regarding food safety risk), and as a consequence, to engage growers of all abilities and business structures.

Major research findings and industry outcomes

The research of the grower base and existing standards identified some significant gaps in knowledge particularly around pre-harvest watering, the in-appropriate use of non-synthetic fertilisers and the appropriate measures to take in the case of a flood or drought. The delivery of the training associated with the new Standard also highlighted a need to develop simple visual cues to assist in the transfer of the Standard's requirements wherever practical.

Recommendations to industry, research peers and HAL

This project has highlighted the need for improved communication to the primary producers on sometimes complex technical information or requirements. Salad Gap has endeavoured to address some of the ways to present information to non-technically trained primary producers in a manner which may assist with their knowledge development and understanding of the issues. It is strongly recommended that industry standard bodies undertake further consideration into providing the tools to assist the primary producers' understanding of the technical and public safety risks they potentially face from their growing activities, as opposed to solely providing the tests, checks and processes that they are required to follow in order to receive an audit pass.

Contribution to new technology and any future work suggested

There are a number of components in the Salad gap standard that could be applied to other sectors of the produce industry.

Introduction

In February 2006, an outbreak of E.coli traced back to Freshcut Spinach occurred in the United States. This event prompted the Freshcut Salad Producers supplying the major retailers in Australia to form a consultation body to debate if this could happen here. Although there had been no major food poisoning outbreaks at this time associated with leafy green produce, the risks were deemed to be the same and taking into account our environmental climate, it was perceived that we could be doing more as an industry, to protect ourselves and the consumer from these risks.

In October 2007 the Food and Agriculture Organisation (FAO) and the World Health Organisation (WHO) convened an expert meeting to consider issues related to the microbiological risks associated with fresh fruits and vegetables. The meeting identified leafy green vegetables as presenting "…the greatest concern in terms of microbiological hazards".

In coming to this conclusion the meeting considered data from around the world and specifically noted that:

- there had been multiple food safety outbreaks, including illness and death, in at least three regions of the world
- the scale of production is large, widespread and consumption is increasing, particularly for fresh-cuts
- leafy green vegetables are produced, processed and distributed using very diverse and complex systems, resulting in multiple control points and potentially multiple opportunities for loss of control ; there is potential for significant increases in the levels of microorganisms, especially for fresh-cut salads

It was agreed by the Forum members that the most effective approach would be to ensure that good agricultural practices were enforced every day, that food safety was "engineered in", and that businesses work together to assure the integrity of fresh-cut products. It was further noted that this was particularly important for ready to eat products such as salads, as for many of these products, there was no 100% effective control step such as pasteurisation or cooking.

Whilst the washing of salad vegetables in the processing plant may significantly reduce the level of microorganisms present, it cannot relied upon to eradicate them all. The experience of the forum members is that washing in sanitiser will only provide a best case 3 log (10^3) reduction in total microorganisms and will not guarantee to eradicate microorganisms such as Listeria Monocytogenes and Salmonella. Field grown product can often have up to a 7 log (10^7) microbiological count and is nurtured in often perfect conditions for microbiological growth; water, ambient temperatures, soil etc
As a consequence the Forum embarked upon a project to design a quality assurance system, incorporating all the "best practice" data and elements from domestic and international sources. The objective of this project was to improve the industry food safety controls associated with fresh-cut salads, focussing on the first stage of the supply chain and to simultaneously develop the grower base knowledge and understanding of the food safety risks.
The project was designed to deliver quality assurance Standard which was more interactive and engaging for the user, and was an addition to the foundation of the other quality assurance standards widely used such as Freshcare or SQF.
The likely impact to the industry from the outcomes of this project will be an elevation in the level of control, understanding and 'ownership' regarding the food safety risk at the primary point of the supply chain and the provision of a suite of effective tools that will assist the growers to make well informed decisions in order to protect themselves, the industry and the consumer.

This project involved significant literature research in order to develop the elements of the standard. A summary of the literature sources used is detailed below.

Literature Review

Title	Version	Published by / Author
Australian Guidelines for Water Recycling: Managing Health and Environmental Risks (Phase 1)	2006	www.ephc.gov.au Natural Resource Management Ministerial Council Environment Protection and Heritage Council Australian Health Ministers Conference National Water Quality Management Strategy
Commodity Specific Food Safety Guidelines for the Production and Harvest of Lettuce and Leafy Greens	16 October 2007	California Leafy Greens Marketing Agreement (LGMA)
Food Safety Begins on the Farm Grower Self Assessment of Food Safety Risks	2003	Department of Food Science, Department of Horticulture, Cornell University
Food Standards Code	Updated regularly	www.foodstandards.gov.au Food Standards Australia New Zealand
Guidance for Industry. Guide to Minimize Microbial Food Safety Hazards of Fresh-cut Fruits and Vegetables	26 October 1998	US Food and Drug Administration Centers for Disease Control and Prevention
Guide to Minimize Microbial Food Safety Hazards of Fresh-cut Fruits and Vegetables.	February 2008	US Food and Drug Administration. Department of Health and Human Services, Center for Food Safety & Applied Nutrition
Guidelines for On-Farm Food Safety for Fresh Produce	2nd edition	Australian Government Department of Agriculture, Fisheries and Forestry
Microbiological hazards in fresh leafy vegetables and Herbs. Meeting report.	Advance pre-publication copy.	Meeting early May 2008 World Health Organisation. Food and Agriculture Organization of the United Nations.
Optimising Yield and Shelf Life of Iceberg and Cos Lettuce. A Training Guide for the Australian Lettuce Industry.	January 2007	Titley et al Horticulture Australia Limited
Sanitary Surveys and Remediation Guidelines for Water Resources (Appendix A of Commodity Specific Food Safety Guidelines for the Production and Harvest of Lettuce and Leafy Greens)	6 June 2007	California Leafy Greens Marketing Agreement (LGMA)

Materials & Methods

The materials and methods adopted in this project were as follows :

1. Fresh Salad Producers Forum collaborated to identify needs of the group and industry in order to determine the process by which to develop the Standard.
2. The Forum engaged and recruited an independent qualified contractor (Jane Lovell from TQA Australia, formerly Tasmanian Quality Assured inc.) to conduct literature research, to provide grower gap audits and to chair the Standard development with input from technical / QA representatives from the Freshcut Salad Producers Forum group.
3. The draft standard was submitted to the Forum group along with training tools and visual aids for review.

Refer to Appendix 1 – Brief Developed for Recruitment of Contractor.

The desired outcome of the project was to develop a documentation and training package for Australian salad producers that was relevant to the Australian environment and Australian growers whilst meeting the food safety needs of the Forum members.

To achieve these aims the following process was used:

- Meet with Forum members to develop a common understanding of the scope of the project and the specific food safety requirements
- Review domestic and international literature
- Visit growers and growing sites across Australia
- Undertake a hazard analysis based upon the risks identified through literature review, the grower visits and individual Forum members' experiences
- Develop a draft document
- Test the document with Forum members, growers and retailers
- Finalise the Salad GAP document and associated records, references, training guides and resources
- Develop a training package
- Deliver training across Forum member supply base and to relevant certification bodies / auditors

The Forum elected to engage a consultant to ensure that an objective independence was present when canvassing and auditing the grower base. This arrangement also assisted the group in allocating appropriate time and resources to drive the research and standard development to achieve the best outcomes in the fastest time.

- Forum members reviewed progress and deliverables regularly throughout the process via quarterly forum meetings to which the consultant was invited to present their findings and to receive advice and input on next steps. Over the course of three meetings the project information and progress reports were presented.
  An example of a set of minutes from one of these meetings is attached in Appendix 1a
- The final standard was agreed within the Forum group and in consultation with major retailers (Coles and Woolworths).
- Road Shows were set up in a number of locations to train and inform growers, audit bodies and standards agencies in the new SaladGAP standard. The forum members also attended these roadshows to support and drive the implementation and promotion of the standard.

All Forum Members have now implemented SaladGAP Standard witheir respective leafy green produce supply partners

Results

Literature Research and Grower Audits Feedbackneeds more detail...

The project commenced with a literature review which yielded valuable information about setting boundaries and specifications around a number of identified food safety controls (e.g. the requirement for pre-harvest watering, was unclear or ambiguous in current quality assurance standards and readily available literature). As a consequence, the search for information was widened and the collective experience of Forum members was drawn on. The resulting limits and control measures are seen as a work in progress and we believe that as the industry learns more, the Standard will be updated accordingly. The grower feedback during the audits and subsequent roadshows was extremely valuable and largely positive. However, common themes regarding concerns related to additional testing costs that could be incurred and time required to implement standard.

Refer to Appendix 2 for details of literature findings– Final Report from TQA (Contractor for Project)

Development of Standard

A new Standard was completed for fresh cut salad primary producers which can be studied in detail in the appendices.

Refer to Appendix 3 – SaladGAP Standard "Good Agricultural Practices for Salad Producers"

In addition to the standard development, a number of tools and training guides were developed to assist the primary producers with implementing the requirements. These documents can be viewed in detail in the Appendices.

Refer to Appendix 4 – SaladGAP Training Guide

Refer to Appendix 5 – SaladGAP Visual Training Guide

Refer to Appendix 6 – Document Templates for all SaladGAP requirements.

Industry and Grower Road shows to Train on SaladGAP

Following completion of the standard and the accompanying training documents, an information Road Show was developed and implemented. The Road Show travelled during August and September 2008 to 4 states and 8 locations, and was attended by 38 grower representatives (with 16 engaging in repeat Shows) and 6 audit bodies attended. Detailed feedback was provided from the attendees and collated in a final report by Jane Lovell at TQA. This report also details the locations. All forum members attended their relevant locations' roadshows and certification audit bodies such as SGS and Ausqual attended.

Refer to Appendix 2 – Final Report from TQA (Contractor for Project)

Implementation of the Standard

Following the road shows, each Forum member was responsible for implementing the standard with > 90% of their respective growers. This adoption rate has successfully been achieved.

Discussion

Outcomes and Objectives

The project aimed to improve food safety controls within the Freshcut Salad industry and provide a Standard that assisted in the education and understanding of the primary producers regarding the associated risks, control and validation steps required. The project achieved:

- A thorough evaluation of the food safety risks associated with primary production of fresh-cut salads.
- The launch of a viable and effective food safety program into the forum members supply base.
- Positive and valuable feedback from the primary producers and auditors about the manner in which the standard was constructed and delivered.
- The handover of the Standard's administration to Freshcare.

Ongoing Standard Maintenance

The media plan and recruitment of a communications co-ordinator to roll out the program (part of the stated project milestones), was not actioned as the Forum group chose to move the administration of the program across to Freshcare. The Forum members believed that this process would provide the "shop front" for SaladGAP and a more effective manner to roll out the program,. The arrangements negotiated include a web portal, regular newsletter updates, auditor training and upgrades and telephone contacts. Freshcare was chosen as this body has over 60% of existing certifications which SaladGAP connects to, and already has experience in delivering effective on-farm quality assurance. These arrangements became effective in October 2010 and have been communicated to the grower base. Freshcare also reinforced this communication in their winter 2010 newsletter (issue 22) which can be viewed on line at www.freshcare.com.au . A copy is attached in the appendices.

Refer to Appendix 7 – Freshcare Newsletter excerpt

Arrangements with other audit standards such as SQF have been established to ensure that growers are able to connect to the information provided. This has been administered successfully through the Freshcare arrangements.

Future Modifications

The Fresh Salad Producers Forum will remain the technical guardians of the program and maintain overall ownership whilst Freshcare will administer the Standard throughout the fresh-cut salad supply base.
An update to the Standard based on grower and auditor feedback is planned to be delivered by the end of 2010.
This update will be funded and provided by the Fresh Salad Producers Forum

Technology Transfer

The adoption of the Standard by Freshcare provides accessibility and promotion for the program to all Freshcare certified growers and suppliers.
Additional grower / processor membership of the Fresh Salad Producers Forum has been considered, including extension of the program to New Zealand. Working with Freshcare, the Forum expects that additional communication of the program will occur, particularly when version 2 is published. Again, supermarket retailer input will be sourced into version 2 of SaladGAP to ensure it maintains relevance to world's best practice for high risk salad production.

Recommendation

The program has provided a strong platform for improving food safety standards in the fresh-cuts industry. The future goal would be to achieve adoption of this standard across a broader section of fresh-cut salads primary production and possibly other sectors of the industry. In order to achieve this, the program would need to gain broader industry support, particularly from the retailers.

In order to achieve this, members of the Fresh Salad Producers Technical Committee are taking all opportunities to engage with the key retailers in the ongoing development of the program.

Acknowledgments

The project team would like to thank the following organisations for their input into this project:

- Horticulture Australia Limited
- Tasmanian Quality Assured Inc.
- The Fresh Salad Producers Forum members and their support staff.
- The growers / primary producers who participated in the gap audits.
- Freshcare management and board, who have supported the development and ongoing maintenance of this standard.

APPENDICES

APPENDIX 1

Fresh Salad Producers Forum

Good Agricultural Practice Project – Brief to Prospective Consultant and description of Contracted Activities.

Vision / Purpose of Project

- To develop an industry best practice for agricultural production and supply, to ensure the safety and quality of freshcut salads.

Objectives

- To develop a benchmark
- To develop a standardised protocol
- To provide an industry approach to minimisation of risk and best practice for food safety.

What do we want the GAP to encompass?

- Environmental factors – water / soil etc
- Food Safety implications
- Farm environment, fencing, proximity to pasture. Etc.
- Water sources, application and treatment
- Harvesting techniques e.g., machinery, hygiene
- Control of pests and weeds etc.
- Maintenance – general farm practices, regimes etc.
- Compliance, training e.g. Application of on farm additives
- Storage, cooling systems and transport
- Reporting, validation
- Chemical usage
- Sustainability issues
- Fertilisers
- Process of implementation
- Risk assessment

Physical Output

- An industry standard specific to freshcut salad processing end use which will be committed to and implemented by the member businesses of the group.

Methodology & Draft Budget

- As per HAL project agreement

Outcomes Required

- A common industry protocol that minimises risk and protects food safety, implemented and operated as standard practice.

Appendix 1a – Example Minutes from a Fresh Salad Producer's Forum Meeting

Fresh Salad Producers' Forum

Thursday 5th June 2008

10am – 3pm

Attendees –

Louise Blackett, chair

Allison Clark

Margaret Judge

Lachlan Grierson

Felicity Robson

Apologies –

Hugh Baird, CF

Review of previous minutes and actions

Agreed minutes reflect last meeting.

Actions arising from previous minutes

1. Expenses worksheet circulated.

Action - Complete timesheets by next meeting – ALL

2. Agreed that logistical/freshness issues be dealt with by each individual company. Any major issues to be brought to the forum as required.

Meeting commenced by confirming that we are not here to discuss commercial issues, they are to be kept completely separate from this forum. We are here to discuss aspects of food safety that are common to our business.

It was noted that Tom Stenzel, CEO of United Fresh Produce Association, will be meeting with the forum after the meeting for formal presentation, followed by dinner.

Action - Louise Blackett to make contact with key customers, DAFF, FSANZ (and other key stakeholders) to present GAP standard at next meeting (Sept).

Review of emerging issues/industry concerns

Media interest around frogs in bags, unfresh produce to be discussed as part of communications plan.

Other issues tabled include tomato salmonella in US, tomato and capsicum exports from NZ, cyclospora. It was agreed that individual companies would respond as requests came through from retailers if questions were asked.

Update on Technical Sub Committee incl. coliform vs faecal coliform testing

Allison Clark updated the forum on the progress of the group. JMark representative has joined the group. Robert Premier is participating although his contract with Salad Fresh has not been renewed.

Action – Allison Clark to resolve who will represent Salad Fresh going forward with Hugh Baird.

It was noted that there are some issues that the Technical Committee may have to include specification and compliance conversations with key decision makers from the forum participants.

Allison tabled that there was the opportunity to second a resource to fast-track the shelf life protocol part of the project and asked the forum for direction on this. This could halve the time and bring forward the delivery to September this year.

It was agreed that the sub-committee will draft recommendations on principles around this issue and present back to next forum meeting.

Action – Allison Clark to present recommendations at next meeting.

GAP project process and next steps

Jane Lovell joined the meeting to update the forum on progress.

It was tabled that three major issues had to be addressed and were resolved in the meeting held on Wednesday 4th June with the sub-committee.

1. Water quality standard
2. Raw manures
3. Compost

The definition of 'salad' was agreed – baby leaf, whole head lettuce, spinach, rocket, baby leaf brassica, herbs and recognised cabbage, celery, tomatoes are also regarded as salad. This second group are often sourced from market agents; it will be necessary to require that these products meet SaladGap standards.

The sub-committee looked at the format for the final product and have decided that a pictorial, colour standard will be produced as well as CD. Reference material to be provided on CD.

Jane provided updates on conversations with BFA and FIFA. The forum agreed to keep these groups up to speed on SaladGap.

Field visits and grower interviews were discussed and feedback shared with the forum. Jane addressed a number of issues raised as a result of these including –

- The potential for 'in-direct' suppliers to member companies was raised and how the forum is going to manage this part of the chain.
- Also raised was the interest by some industry members to join the forum. It was agreed that the forum would address this through the communications program.

Action – Felicity Robson to incorporate attracting new forum members as an objective of the communications plan.

Action – Review of SaladGap by all members Monday 21st July 2008 10am start.

- It was agreed that the best outcome for the project was the standard to be widely adopted by the industry.
- The reality of SaladGap enforcement and the exceptions made by each processor was raised. How is the group really going to enforce and maintain the integrity of the process?

Action – Jane Lovell to incorporate conformance and compliance 'decision making tree' into standard.

Jane sought guidance on:

- quality of produce as opposed to safety as part of the standard and how far the standard should go on quality eg. vacuum cooling of product
- impact of mono-culture of some growers and whether the standard will encompass this. It was agreed that this would be parked and addressed in the environmental aspect of the project.

It was agreed that recording systems (spray diaries) will be included into the standard.

HAL project stage 2 – Communications – Bring on the Salads campaign

One of the original reasons we came together was to review crisis communications as an industry and to share good news to build an emotional bank balance.

Purpose of this session is to review of original project brief and agree and objectives of communication plan :

Original brief stated :

Recruit a communications co-ordinator

Devise a communications plan

Develop the roadshow and carry it out.

Forum members agreed to the above objectives.

3 areas to review moving forward

a) Promotion of the GAP program

b) Bring on the Salads campaign.

b) Promotion of positive media / responding to negative media.

Promotion of the GAP program

Objectives – who are we?, elevate consumer, retailer, grower, other stakeholder confidence, use to recruit new members, communicate to growers - not another system. Key audience is growers and retailers. Communication of levy funding from HAL?.

Action – Clarify our plan with system owners. Jane L

Action – Create the communication sub committee (Felicity, Hugh, Helen Waterworth (Houstons), Shelley Davidson (Crockets), J Mark (TBC))

Action – Formulate a coms plan for the promotion of the GAP program. Communication Committee.

Bring on the Salads

Opportunity to build reputation and trust direct with the consumer.

The team agreed the messages we wish to convey in the bring on the salads campaign. Objectives, correcting misconceptions / presenting the facts, boosting consumer profile of the industry, becoming the point of reference for the industry.

Action - Develop a brief for an agency to recruit a communications consultant. Communication sub Committee.

Brief for Coms Project leader – objective, broad food industry experience, no hidden agendas / independent, will listen to forum members and take on board the messages we wish to convey, challenge where necessary.

Action – Budget for coms project needs to be rechecked – Louise to resend detailed budget to all forum members.

Crisis Communications

There is currently a void to respond to media concerns and queries. We don't have a communication platform.

Action – Contact HAL regarding plans for a "replacement" Fresh Produce Watch and industry spokesperson. Felicity

Action – Collate a recommendation on how we would handle communications and circulate to the group. Felicity

Action – Include in emerging issues and trends agenda item increased media coverage relating to salad growing, production and processing eg, water, packaging, chlorine etc.. All

Other Communications Activity

Action – Logo's for SaladGAP and bring on the salads are needed for print by mid Aug. Draft a brief for a printer and get proofs Margaret.

Other business

- Environmental standards
- Coliforms vs Faecal Coliforms

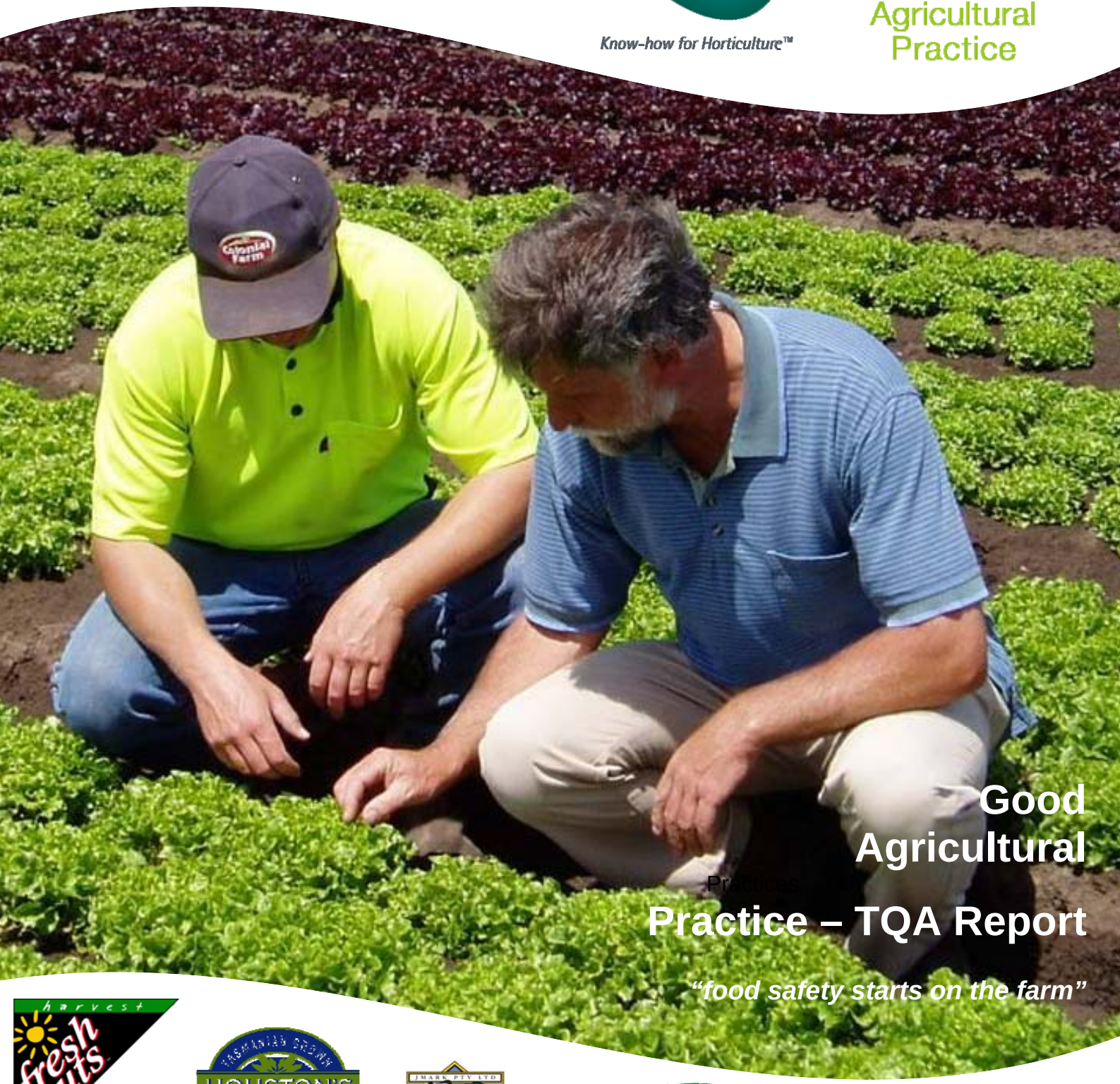
APPENDIX 2 – FINAL REPORT TQA

Final Report

HAL project OT06011
Fresh Salad Producers' Forum –
Good Agricultural Practice Project

HAL
Know-how for Horticulture™

salad GAP
Good Agricultural Practice



Good Agricultural Practice – TQA Report

"food safety starts on the farm"

harvest fresh cuts
HOUSTON'S FARM
Gourmet Selections
Mrs Crockett's Fast & Fresh
Salad Fresh

Produced for the Fresh Salad Producers' Forum, with the support of Horticulture Australia Limited

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Overview

Tasmanian Quality Assured Inc (TQA) was retained by the Fresh Salad Producers' Forum to develop a set of good agricultural practices for the production of salad and to assist with the extension of these practices through delivery of training sessions in the main salad growing areas of Australia. The resulting program, which has become known as "Salad GAP" (Salad Good Agricultural Practices), was developed, trialled and rolled out to growers between March and October 2008. The project is part of a larger initiative that includes marketing and communication aspects and is funded by the Forum members (Harvest Freshcuts Pty Ltd, Salad Fresh, Mrs Crocket's Kitchen Pty Ltd, Houston's Farm and J Mark Pty Ltd) and Horticulture Australia Limited.

In tackling this task, TQA also considered issues related to implementation and verifying ongoing compliance with the good agricultural practices, as well consistency of interpretation of the required standard of compliance. As a result, additional training resources were also developed, including visual training guides, proforma records and supplier specifications, and training and audit guidelines were provided to external auditors.

In total 38 growers from 31 businesses and 16 auditors from 6 businesses attended training. Courses were held in South Australia (Virginia for growers), Victoria (Bairnsdale and Bacchus Marsh for growers, Melbourne for auditors), Western Australia (Wanneroo for growers, Perth for auditors) and Queensland (Stanthorpe and Gatton for growers, Brisbane for auditors) during September 2008.

As a consequence of working through Salad GAP with growers and auditors a number of opportunities for further improvement have been identified and has been included in this report for consideration by Forum members.

Development of Salad GAP and associated resources

The desired outcome of the project was to develop a documentation and training package for Australian salad producers that was relevant to the Australian environment, Australian growers and met the food safety needs of the Forum members.

To achieve these aims the following process was used:

1. Meet with Forum members to develop common understanding of the scope of the project and the specific food safety needs
2. Review both domestic and international literature
3. Visit growers and growing sites across Australia
4. Undertake a hazard analysis based on risks identified through literature review, grower visits and Forum members' experiences
5. Develop a draft document
6. Test document with Forum members, growers and retailers
7. Finalise Salad GAP document and associated records, references, training guides and resources
8. Develop training package
9. Deliver training across Forum member supply base and to relevant certification bodies / auditors

Highlights

<u>Knowledge black holes</u>

The principles of HACCP (Hazard Analysis Critical Control Point) include the identification of potential food safety hazards and the establishment of critical limits that effectively control these hazards. Through the Salad GAP process a number of food safety hazards were identified. However in many cases finding relevant and valid critical limits was not possible. In some instances limits have been adopted from international literature and in other instances limits have been established based on discussion and advice from Forum members, Technical committee members and retailers. It is acknowledged that this is not an ideal situation and it is hoped that over time more research and field data will become available to enable review or validation of the limits established in Salad GAP.

In particular, more data is required in the areas of:

- Pre harvest water quality, including
  - effects of time between water use and harvest,
  - effect of method of irrigation,
  - developing more detailed understanding of the relationship between pre harvest water quality, the microbiological status of product at harvest and the microbiological status of packaged product.
- Use of non-synthetic fertilisers, particularly
  - the relationship between microbiological status of product, time since livestock had access to land and time of planting of salad crops,
  - the relationship between microbiological status of product, time since application of untreated manures and time of planting of salad crops,
  - the effects of different types of manures (chicken litter, feedlot cattle manure etc),

    - options other than exclusion periods following livestock being on land or application of untreated manures (eg increased microbiological testing of soil to gain clearance to plant).
- Plant back period following flood
    - options other than 60 day exclusion period following flood (eg increased microbiological testing of soil to gain clearance to plant).

The Decision Guides

While many food safety good agricultural practices were relatively easy to identify and communicate, there were also areas of significant food safety risk where a single solution or approach was not deemed suitable to address the complexity of agricultural practices and environmental conditions present amongst suppliers to the Forum members. In order to deal with these issues, Decision Guides were developed to provide a practical and logical means of assessing and addressing the risk. Decision Guide Records were created to provide growers with a standardised way to record their approach to dealing with the identified risk. Salad GAP includes four Decision Guides and accompanying Decision Guide Records covering the areas of:

- New sites (Site assessment)
- Non synthetic fertilisers
- Non synthetic fertilisers – indirect contact
- Pre harvest water

The Decision Guides include clear (critical) limits and guidance on actions to be taken if these limits are exceeded (corrective and preventive actions), thereby including the underlying principles of HACCP. The Decision Guides also encompass the philosophy of Salad GAP; to promote honest and open communication between grower and processor so that food safety is not compromised while at the same time recognising that primary production takes place in a dynamic environment that cannot be completely controlled by the grower. The guides require growers to discuss “non conforming” situations with all relevant Forum members with the aim of finding a mutually acceptable way forward. It is hoped that through such discussions the relationships between growers and processors can be strengthened and also that data can be collected to permit more informed debate of limits in future.

Visual training guide

Growers identified training casual labour, particularly itinerant labour and people with literacy or language issues, as an area of difficulty in communicating and enforcing food safety standards. To assist in this area photos showing a range of both desirable and undesirable practices were taken and used to develop the Salad GAP *Visual training guide* (pictures only, no text) and *Training guide* (pictures and text). These materials have been supplied in hard and electronic copy to all participants that attended training. By providing the electronic copy, growers have the ability to print additional copies and provide the training resources to other businesses such as contract labour companies. The *Visual training guide* has been particularly well received by growers and auditors alike, and has been commended for effectively addressing an area of significant food safety risk.

Training feedback

General

Salad GAP training was generally well received by growers and auditors alike, receiving a rating of "very good/very useful". The Bairnsdale grower group gave the lowest average rating for training. Factors that could have attributed to this result include it being the first large group, the training room being too small for the number of participants (there were a lot of registrations the day before training and it was not possible to secure a larger venue) and the challenges associated with water quality and use of livestock in the cropping rotation.

While different regions identified different challenges to implementing Salad GAP, concerns regarding additional costs, associated with additional testing (water, product, non-synthetic fertilisers) and growers' time, were a common theme. Growers are uneasy with what appears to be a continual increase in compliance requirements for no additional return and with their ability to continue to absorb these costs. Recent dramatic increases in raw materials such as synthetic fertilisers intensifies this situation. Many growers were cynical regarding the consistency of buyers adhering to QA and food safety requirements; all groups cited instances of buyers purchasing from non-certified sources in times of short supply.

There were also some specific regional challenges:
Bairnsdale – exclusion times after removing livestock and for new sites, water quality
Stanthorpe – cost of additional testing, particularly water testing[1]. Use of animal manures (from cattle feed lots) and livestock access to dams.

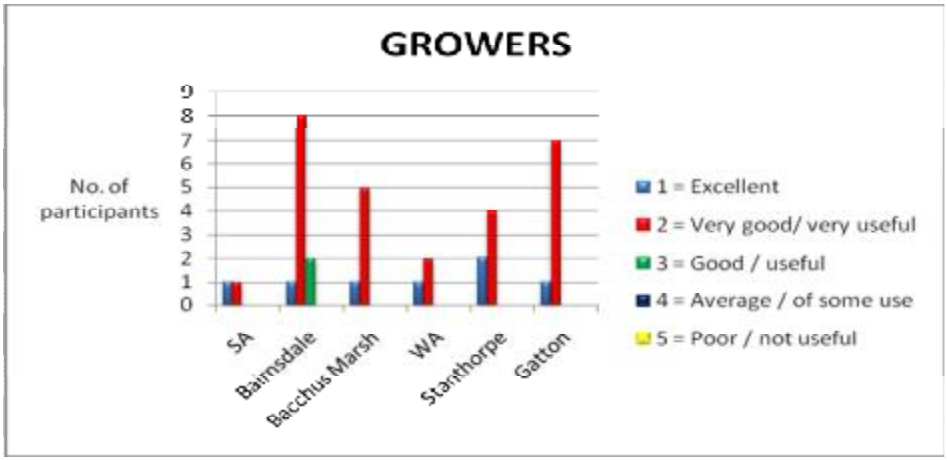
As a consequence of attending training, growers reported learning more about:

- water – the risk it presents, the standard and testing required
- the need for regular and open communication between grower and processor
- the Salad GAP approach to integrating systems rather than "another one"
- importance of personal hygiene and
- the impact of a food safety outbreak

Comments and more specific feedback is included in Appendix 1: *Feedback on Salad GAP training from growers and auditors.*

[1] It appears Queensland growers are paying around $120 for each water test and are including E. coli, Salmonella and Listeria. Hence the additional water testing requirements could cost more in this area.

Table 1: Grower feedback

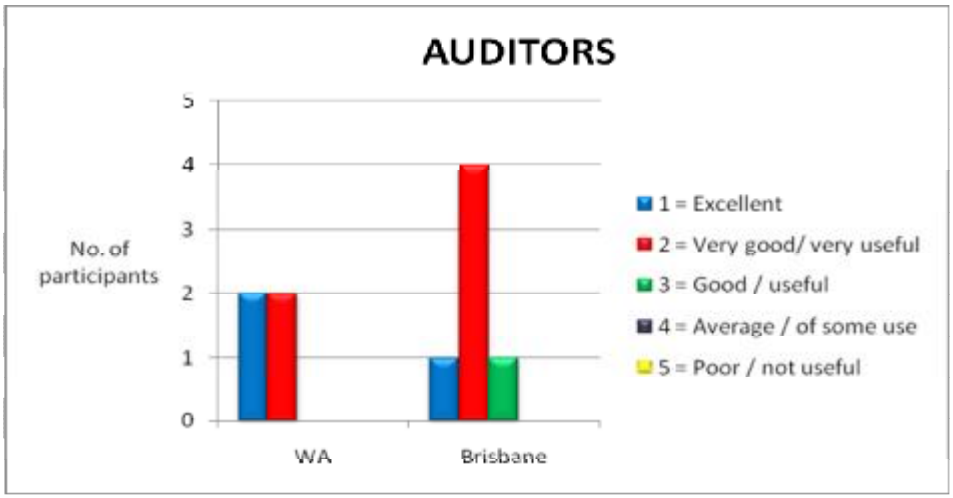


GROWERS

	SA	Bairnsdale	Bacchus Marsh	WA	Stanthorpe	Gatton
Average Score	1.50	2.09	1.83	1.67	1.67	1.88

Total Grower Average:	1.77

Table 2: Auditor feedback



AUDITORS

	WA	Brisbane
Average Score	1.5	2

Total Grower Average:	1.80

NB Feedback not collected from Auditor training in Victoria

Issues requiring Forum members review / action

During discussion of Salad GAP requirements with both growers and auditors a number of issues arose that require further consideration by the Forum members. Consideration should also be given to how any amendment or clarification is going to be communicated to growers and auditors and the timing of any alteration to the requirements of Salad GAP (e.g. change as soon as possible to aid grower uptake or wait till annual review in mid 2009).

Non-synthetic fertiliser application record (2.1)

Some growers questioned the need to record wind speed and direction, time of application and incorporation details. The Salad GAP risk assessment process requires that the non-synthetic fertiliser be assessed and only be used if it complies with certain specifications, in other words it is "safe". Therefore maintaining additional records appears excessive and inconsistent with pre harvest water use where no specific records are required.

Cleaning of equipment after applying non-synthetic fertiliser (2.1)

Again there appears to be an inconsistency in the risk associated with non-synthetic fertiliser that has been assessed and deemed "safe". Salad GAP currently requires application equipment to be either dedicated for this task or cleaned and sanitised after use. Is cleaning and sanitising necessary if the fertiliser is safe? Perhaps this should only apply if "unsafe" products are used (for example raw manure applied to non salad production land)?

Acceptable processing standards for non-synthetic fertilisers (2.1 Decision Guide)

The auditors indicated there was a standard for rendering of animal products that should be considered and added to the list of acceptable standards for non-synthetic fertilisers.

Composting guidelines (2.1 Decision Guide)

It was recommended that some guidelines be identified or developed to assist growers understand what constitutes an appropriate composting process.

Pre harvest water (3.1)

Pre harvest water quality does not address issue of contamination due to algal blooms.

Water testing (3.1)

Growers, particularly in Queensland, indicated that the additional water testing requirements of Salad GAP were a significant expense. Discussion of costs highlighted the fact that these growers were testing for *E. coli*, *Salmonella* and *Listeria*. It is likely that some misunderstanding exists regarding water testing requirements and that growers are testing water to the same standards as produce. Forum members are encouraged to investigate this further with their growers and reiterate the need for only *E. coli* testing to meet the requirements of Salad GAP.

Seasonal water testing (3.1)

In instances where growers use different water sources at different times of the year the need to develop a 12 month history for this water was questioned. It was agreed that in such instances, water need only be tested for the period of the year it is used, for example, if a dam is used for 4 months of the year, it can be tested only once and this test should occur very early in its use. Further discussion of this point by the Forum members is needed. For instance in the example given should there actually be two tests, one at the beginning of use and another 3 months later (i.e. just before use ceases).

Calibration of spray equipment (4.1)

The chemical section does not make reference to the need to calibrate equipment annually or when nozzles are changed. This is included in many quality assurance systems so its omission does not present a significant risk, but for consistency perhaps it should be included in Salad GAP?

Other chemicals (4.4)

The use of mouse "pellets" requires further consideration. It has been suggested that only blocks should be used as there is reduced risk of these becoming lodged in lettuce heads. Some growers use grain infused with rodenticide (e.g. "Mouseoff") and this is spread adjacent to crops. Should this practice continue and if so are the current controls in Salad GAP sufficient?

Salad GAP Pre harvest checklist (6.1)

In some regions there was resistance to using the *Salad GAP Pre harvest checklist.* Growers felt this sort of tick sheet did not add value and were concerned at having to complete it every day for every block/paddock they harvested. Growers are not obliged to use this particular record as long as they can prove to the auditor's satisfaction that the actions required are taking place. The auditor may need to review customer feedback / complaints to identify any recurring issues. This point may need to be reinforced with growers, particularly in Victoria.

Cleaning of crates (7)

It appears that crates / bins / tubs are not always appropriately cleaned when supplied to growers, even in cases where growers are charged a cleaning levy. Growers have requested that the Forum investigate this issue with the main suppliers, Chep and United, on their behalf.

Off farm storage (9 or 11)

Salad GAP does not address the issue of off farm storage of product. It is unclear if this is common practice in the salad industry and if so what controls should be included. This maybe best handled through the Supplier section of Salad GAP and an appropriate supplier specification developed and distributed.

Auditors

It is unclear how SGS are going to ensure their auditors are trained in Salad GAP as only a sub contractor, Danny Carroll, attended training. This auditor is based in WA. It would be appropriate for Forum members with existing relationships with SGS discuss this further directly with that certification body.

Audit rules

The *Salad GAP auditing rules* could be included in the Salad GAP document rather than as a separate document and should incorporate rules regarding suspension of certification included.

Communication

A number of issues exist in relation to communication:

- auditors and growers need to know who to contact for further information or to provide feedback on Salad GAP for the annual review. It may not always be appropriate for this to be Forum members and there needs to be the ability for feedback to be provided anonymously
- the date of the annual review needs to be communicated to growers and auditors
- a flyer or information brochure should be developed to promote and explain Salad GAP and should include contact details
- a process needs to be developed for alerting growers and auditors to changes to Salad GAP

Resourcing

The Forum needs to consider how the next version of Salad GAP will be developed and resourced. Consideration should also be given to how the identified knowledge gaps can be addressed, for example is this through collection and analysis of field data or through research projects?

Non Salad GAP product entering Salad GAP supply chain

Forum members should review their supply contracts to prevent non Salad GAP product being supplied through a Salad GAP certified grower without their knowledge.

Purchasing hypocrisy

Growers in many regions commented on the double standards that exist in times of short supply – i.e. food safety and quality assurance requirements are overlooked. The Forum members need to be careful to ensure their requirements are consistently applied or significant damage will be done to the Salad GAP initiative. Similarly, retailers should be encouraged to support the positive and proactive stance taken by Forum members by requiring Salad GAP to become the standard for supply of salad. Unfortunately in some cases the feedback received from retailers thus far has been to criticise some of the critical limits incorporated in Salad GAP rather than recognising that establishing these limits is actually a significant step forward for the industry. Many suppliers not working to Salad GAP will currently be working to lesser limits if indeed they have even identified some of these issues as food safety hazards at all and in so doing Forum suppliers are potentially financially disadvantaged.

Expanding the Forum

Consideration should be given on how to expand the Forum and particularly the use of the Salad GAP logo.

Appendix 1: Feedback on Salad GAP training from growers and auditors

Three things that were interesting about today / about Salad GAP are:

GROWERS

South Australia

- knowing what the company wants and needs
- learning as a grower what can go wrong

Victoria - Bairnsdale

- similar to other QA programs
- reasonably simple and easy to understand
- water
- fertiliser
- labour
- if composted fowl manure is safe, why worry about wind direction?
- USA video – positive action with regards to minimising the potential for contamination
- monthly testing of recycled water monthly vs annual
- soil test of paddock that has had cattle on it 12 months previous
- why report/detail spreading of composted manure when it passes Aust Stds
- cleaning
- paddock hygiene
- water contamination / standards
- dispose of chemical drums
- use Salad GAP as marketing tool
- extending services to customers

Victoria – Bacchus Marsh

- difference between hydroponic and conventional
- pre start up check
- USA Video
- mixture of growers and comments on current practices
- frogs
- hygiene
- bore water
- cleaning
- E. coli levels – water
- banning of organic manures

Western Australia - Wanneroo

- ability to use non synthetic fertilisers
- industry is changing
- how easy microbes can be transferred
- lifting the bar on food safety
- identification of risk within the supply chain
- passing ligitious onus down the supply chain

Queensland - Stanthorpe

- pathway for help in implementation
- problems in growing salad lines
- getting informative booklets for reference
- aim of Salad GAP
- relevance to our safety as an industry
- water
- non-synthetic fertilisers
- post-harvest handling
- need for all suppliers to comply
- need for greater testing
- possible risks that are out there

Queensland - Gatton

- Crockets not present
- good visual training guide
- visual training guide good for non-English speaking workers
- use of decision guides
- whole session was pretty interesting
- possible areas of contamination
- other supplier inputs and variations
- Salad GAP easy to implement
- levels to avoid contamination
- details re high risk items i.e. Irrigation water
- draws together specific requirements for high risk vegies
- very interesting, some good ideas for my QA

AUDITORS

Western Australia

- development / use of decision guides and their requirements
- overall Salad GAP program

Queensland

- looking at overall improvement in salad industry
- taking realistic approach to solving problems
- water safety
- industry driven – no government involvement
- decision guides
- water requirements
- fertiliser/composting
- harvesting materials/implements
- comprehensive standard
- reasonably practical, all things considered
- where it fits with on-farm programs
- easy to follow documentation
- easy style of presenter

The three most important concerns I have about Salad GAP are:

GROWERS

South Australia

- making sure it is put in practice with current QA system
- added cost

Victoria - Bairnsdale

- extra work load
- duplication info
- more costs to grower
- withholding period for acquisition of new land
- cost of continual testing
- extra paperwork
- water
- paddock selection
- water quality and checking monthly for recycled / reclaimed water
- water standards
- fertiliser
- post harvest handling
- harvesting around flood situations
- implications of hand harvesting re contamination
- harvesting within time limit after livestock on paddock
- requirements for pre-harvest checks
- availability of new sites if livestock run on them
- system open to abuse by those not doing GAP
- increased reporting by producers
- requests by chain stores may be unachievable
- running cattle as part of your rotation
- fitting in with existing QA
- conflicting information from forum members

Victoria – Bacchus Marsh

- not everyone will commit with equal energy
- power and ability of supermarkets to continue (or not) the safety issues of the industry
- extra pressure to continue with current customers, where does it end
- paperwork time
- animals in field
- water
- suppliers
- staff
- complying with current work processes
- will chain stores support those that take it up

Western Australia - Wanneroo

- extra time to bring Salad GAP online
- extra money to bring Salad GAP online
- more time will be spent on book keeping than on farm practices
- suppliers - requirements of and their compliance to
- expense to implement without passing on costs
- exposure to litigation at farm level
- inherent hypocrisy within vegetable industry in periods of short supply

Queensland - Stanthorpe

- cost of testing and maintaining system out of season
- cost of maintaining paperwork
- problems created by being organic
- amending GAP
- expenses of future increased testing to be worn by farmer
- some points not taken on by the processors driving it e.g. crates not cleaned properly
- amount of testing
- paperwork cost
- dam water and livestock
- crate washing
- who covers the costs of implementation
- implications for industry if this is not implemented
- Salad GAP is implemented in practical terms

Queensland - Gatton

- forum members all give same answer / info to problem
- costs of extra tests
- dealing with contract labour
- testing regime with water micro
- extra audit requirements
- integrating with existing QA programmes
- some requirements seem impractical
- staff restrictions with multiple farms mean some requirements unable to be met
- can't control what native wildlife does to crop

AUDITORS

Western Australia

- providing Salad GAP implementation for Salad GAP
- cost to the grower
- growers being ready for the initial audit, having backup records

Queensland

- cadmium and lead levels
- grower knowledge
- training of workers
- not all producers of salad products are involved
- only salad products involved – should include others e.g. strawberries
- not all processors have access to refrigeration
- sanctions once a grower does not close out a critical or 90% major within 28 days they require a re-audit. Suspension may be an option after the 28 day period to allow the grower to regain certification after closing out CAR's without a re-audit
- will it go forward?
- will growers accept it?
- impact on existing programs

The three most important things that I learned today are:

GROWERS

South Australia

- contact with the customer
- a bit more work but ok
- quality of product

Victoria – Bairnsdale

- liaison with forum group
- E. coli variable on water
- paddock selection
- manures
- need to constantly communicate to suppliers
- withholding irrigation prior to harvesting
- understanding Salad GAP in its entirety
- hand harvesting has significant risks associated with contamination
- industry wide standard
- most systems already in place
- water poses risk to food safety
- inconsistency of non-synthetic fertiliser - accreditation and ongoing recording
- ChemClear®
- cleaning
- harvesting
- development of putting programs together

Victoria – Bacchus Marsh

- the full effect of a food safety outbreak
- fertiliser input
- paddock hygiene
- flood ground
- water
- suppliers
- Victorian off label use chemical
- paperwork doesn’t stop, goal posts keep moving further away

Western Australia - Wanneroo

- the need to improve the cleanliness of the working environment
- personal hygiene and its importance
- don’t take the “she’ll be right attitude”
- farm is area of highest risk and smallest return

Queensland - Stanthorpe

- how to implement system
- becoming a producer of a safer product
- what to do if a problem arises
- over testing on water
- non-synthetic fertiliser allowed
- traceability of everything
- overall requirements for food safety regulations
- other growers share same concerns
- everyone in the supply chain must be involved
- this must be implemented to maintain consumer confidence

Queensland - Gatton

- water testing
- E. coli, Salmonella and Listeria testing
- communication between supplier and processor to be open
- water E. coli levels
- areas of contamination
- what is required
- when and how to get assistance

AUDITORS

Western Australia

- background / philosophy – reason for development
- auditors expectations in relation to Salad GAP
- very informative

Queensland

- horticultural standards from other areas of the world
- requirements for removal of livestock
- problems encountered by salad producers
- good requirement for water testing
- chemicals
- water treatment
- pre/post-harvesting
- auditors will be able to add on to other audits

Further information

GROWERS

Victoria - Bairnsdale

- clarity in E. coli levels in water used in overhead vs drip irrigation
- local testing facilities to enhance ability of more economical comprehensive and accessible testing
- need to understand risks associate to crop specific i.e. broccoli vs salads

Victoria – Bacchus Marsh

- staff training
- auditors assistance

Queensland – Stanthorpe

- not sure – probably need someone to assess that our system is compliant

Queensland - Gatton

- material handed out should be enough

AUDITORS

Western Australia

- phone numbers for forum members
- provision of powerpoint slides for internal auditor training

Suggestions

GROWERS

South Australia

- all good for your first time

Victoria - Bairnsdale

- make seedling supplier part of salad GAP
- needs further improving

Victoria – Bacchus Marsh

- follow up is important
- it should be a government requirement before rules are put in place so it is a level playing field
- most of the material irrelevant to hydroponics, but I enjoyed learning about ground grown methods
- I hope this doesn't cost us too much in the long run
- course to be in afternoon instead of morning
- Jane was very fair and open with all without prejudice against any level in the lettuce industry. Information informative
- well done I think everyone will realise that it is not going to take too much to be compliant in

Western Australia – Wanneroo

- online updates and storage of data
- a good idea for the growth of the category but additional expense for the farm that the processor will not pay for

Queensland - Gatton

- prior use of land has caused an issued with exceeding MRL levels for a salad leaf grower – land was a rose farm
- irrigation water requirement needs further development
- information sheets good
- very easy to follow
- in general course very well presented and educational

AUDITORS

Western Australia

- well constructed
- well presented
- will feel confident doing first audit

Queensland

- well presented

APPENDIX 3 – SALADGAP GOOD AGRICULTURAL PRACTISES FOR SALAD PRODUCERS

salad GAP

Good Agricultural Practice

Good Agricultural Practices for salad producers

"food safety starts on the farm"

harvest fresh cuts

HOUSTON'S FARM

Gourmet Selections

Mrs Crockets Fast & Fresh

Salad Fresh

Produced for the Fresh Salad Producers' Forum, with the support of Horticulture Australia Limited

Know-how for Horticulture™

Author Jane Lovell, Tasmanian Quality Assured Inc.

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Disclaimer

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Contents

Abbreviations and definitions

ACO	Australian Certified Organic.
Anaphylactic response	A severe and sudden allergic reaction that is potentially life threatening. It occurs when a person is exposed to an allergen (such as a food or an insect bite). The reaction usually occurs within 20 minutes of exposure to the trigger. Milk, eggs, peanuts, tree nuts, sesame, fish, crustaceans and soy are the most common food triggers, which cause 90% of allergic reactions.
AS 4454-2003	Australian Standard. Composts, soil conditioners and mulches.
cfu/ml	Colony forming units per millilitre, the number of bacterial colonies per millilitre of sample.
Crop free area	An area of the paddock / field /garden where crops will never be grown. Crop free areas do not include fallow areas that will be replanted.
E. coli	Escherichia coli. An indicator of faecal contamination, e.g. sheep or cow manure in water.
Equipment	Objects, machinery and tools used in the process of growing and harvesting salad. For example crates, bins, tubs, tractors.
Flood	The overflowing of water from a lake, river or other body of water, onto land that is normally dry.
Fresh Salad Producers' Forum	A group of salad processing companies working together to address technical issues of common interest, such as food safety, retailer testing and certification standards and legislative requirements.
Forum Steering Committee	The Forum Steering Committee includes Convenience Foods Pty Ltd (Salad Fresh), Harvest Freshcuts Pty Ltd, Mrs Crocket's Kitchen Pty Ltd, Houston's Farm and J Mark Pty Ltd.
GAP	Good Agricultural Practice
Human pathogens	Any agent, especially a microorganism, able to cause disease in humans. Examples include: Bacteria: Bacillus cereus, Escherichia coli (E. Coli), Listeria spp. Salmonella, Staphylococcus aureus Viruses: Hepatitis A Protozoa: Cryptosporidium, Giardia Fungi Algae

ML	Maximum Level. Maximum level of a specified contaminant or specified natural toxicant which is permitted to be present in product. MLs are specified in Standard 1.4.1 of the Food Standards Code (www.foodstandards.gov.au)
MRL	Maximum Residue Limit. Maximum concentration of a residue that is legally permitted on product after harvest. MRLs are specified in Section 1.4.2 of the Food Standards Code (www.foodstandards.gov.au)
NASAA	National Association for Sustainable Agriculture in Australia
New site	Land that has not previously grown salad vegetables or is being brought back into salad production after a significant break from cropping. Cropping includes growing grain crops but does not include pasture.
Non-food contact roles	Activities where operator does not contact food or pose a risk to food safety. For example: o tractor operation o fencing o equipment maintenance o office work
Non-synthetic fertiliser	A fertiliser containing organic materials such as: • animal manure • fish or animal products • fish or animal by-products • plant products They include: • raw manures • aged manures • composts • soil ameliorants / amendments / conditioners • compost teas • mulches
OC	Organochlorine. This group includes chemicals such as DDT, Lindane and Dieldrin.
OP	Organophosphate.
Physical contamination	Physical contamination is any non-salad item found with harvested product and includes things that may cause illness, injury or may otherwise offend consumers.
Pre harvest water	Water used before harvesting crop, including water used for irrigation, fertigation, mixing agricultural chemical sprays or foliar fertilisers.

Postharvest water	Water used after harvesting the crop, includes water used to prevent dehydration of product, for cooling and for washing.
Raw manure	Manure that has not been specifically treated to control microbiological contamination. Manure that has been stored for sometime or has other material mixed with it but has not been subject to a specific time / temperature regime is considered raw manure.
Ready to eat	Food that is ready for consumption, but includes food that may be re-heated, portioned or garnished or food that undergoes similar finishing prior to service (FSANZ Standard 3.3.1).
Relevant members of Fresh Salad Producers' Forum	All the businesses supplied that are members of the Fresh Salad Producers' Forum.
Salad	Chilled, ready to eat products including, but not limited to any of the following ingredients: • baby leaf • bok choy • cabbage • capsicum • carrots • celery • cucumber • culinary herbs and garnishes • elk • green and red romaine • mizuna • mustards • onions • pak choy • radicchio • radish • rocket • spinach • spring onions • tatsoi • tomato • whole head lettuce Due to the differences in production methods, sprouts and hydroponically grown vegetables are not included in this definition of salad.
Salad GAP	Salad Good Agricultural Practice. Salad GAP is primarily restricted to issues related to food safety, and therefore does not specifically cover environmental or occupational health and safety.

Soil ameliorant	Soil ameliorants include chemical or physical amendments that can improve soil performance, including fertilisers (to address nutritional problems) and soil conditioners (to address other chemical or physical problems).
Withholding period (WHP)	The minimum period of time that must elapse between the last application of the chemical and harvest.

About Salad GAP

What is Salad GAP?

Salad GAP (**Salad G**ood **A**gricultural **P**ractices) is an initiative of the Fresh Salad Producers' Forum (the Forum) and is 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.

By collaborating on projects such as Salad GAP, the Forum is developing a unified approach to essential pre-competitive issues, such as food safety. Compliance with Salad GAP will enable salad growers to demonstrate best practice to a range of key stakeholders, including salad processors and retailers. Implementing the practices identified in these guidelines will also protect the integrity of the salads' market, support Forum members' brands and ultimately will have positive flow on effects for the whole industry.

Why Salad GAP?

Salad vegetables have been implicated in a number of serious food safety events. In October 2007 the Food and Agriculture Organisation (FAO) and the World Health Organisation (WHO) convened an expert meeting to consider issues related to the microbiological risks associated with fresh fruits and vegetables. The meeting identified leafy green vegetables[1] as presenting "…the greatest concern in terms of microbiological hazards". In coming to this conclusion the meeting considered data from around the world and specifically noted that:

- there had been multiple food safety outbreaks, including illness and death, in at least three regions of the world
- the scale of production is large, widespread and consumption is increasing, particularly for fresh cuts
- production is expanding in non-traditional markets due to reasons of convenience and nutrition
- leafy green vegetables are produced, processed and distributed using very diverse and complex systems, resulting in multiple control points and potentially multiple opportunities for loss of control
- there is potential for significant increases in the levels of microorganisms, especially for fresh cuts.

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

The issues identified by FAO and WHO highlight the responsibilities that all members of the supply chain share in ensuring the food safety of salad vegetables. Controls are necessary at all stages. Salad GAP has been developed to help producers address the first step.

Food safety outbreaks don't just affect one farm and they don't just affect one processor or one retailer. The causes are often difficult to trace and in the meantime consumers lose confidence and sales plummet; and that is before considering the impact on those affected by food poisoning and those ultimately found responsible. Therefore the most effective approach is to ensure that good agricultural practices are enforced every day, that food safety is "engineered in" and that businesses work together to assure the integrity of products. This is particularly important for ready to eat products like salads, as for many of these products, there is no 100% effective control step like pasteurisation or cooking. Washing salad vegetables can reduce the level of microorganisms but it cannot reliably eradicate them.

How will it work?

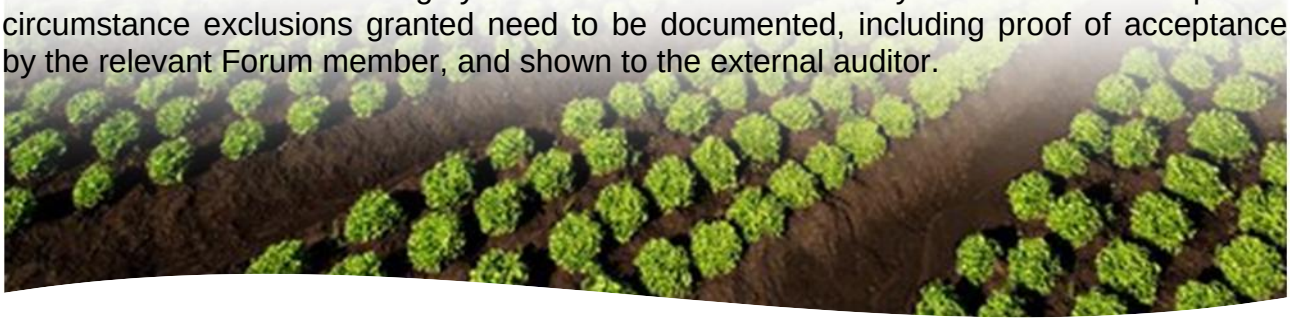
Compliance with Salad GAP will be required by any business supplying salad vegetables to members of the Fresh Salad Producers' Forum from 1 April 2009. Salad GAP is designed to add on to existing quality assurance programs, not replace them, and must be externally audited every 12 months. It is recommended you complete an internal audit at least once every 12 months. The *Salad GAP internal audit checklist* has been created to assist with this process. In the majority of cases compliance to Salad GAP will be able to be assessed under the existing audit arrangements of each business; either by asking the auditor to complete an additional checklist or as a bolt-on module.

On successful completion of the audit the certification body will provide each business with documentation to prove achievement of the Salad GAP standard. A copy of this documentation can then be forwarded to relevant Fresh Salad Producers' Forum members.

What happens if I cannot meet the requirements of Salad GAP?

Salad GAP has been produced for and is endorsed by all members of the Fresh Salad Producers' Forum. If a business cannot meet the requirements of Salad GAP, the business must initiate discussions with relevant members of the Forum. While the Forum members are intent on maintaining the integrity and food safety of product, it is recognised that there are external factors impacting primary production beyond the control of producers. Other options and solutions may be able to be found, while ensuring that food safety is not compromised.

In order to maintain the integrity of the Salad GAP brand any deviations or exceptional circumstance exclusions granted need to be documented, including proof of acceptance by the relevant Forum member, and shown to the external auditor.



Updating Salad GAP

The Fresh Salad Producers' Forum will review Salad GAP at least annually to ensure it continues to meet their needs, the needs of suppliers and growers and the needs of their customers. As part of this review, feedback will be sought from growers and from certification bodies auditing Salad GAP. Updates will also consider any regulatory or legislative changes that could affect Salad GAP. Feedback will protect the identity of the supplier / grower unless express permission is gained from that business.

Forum members will review the hazard analysis that supports Salad GAP as well as the Salad GAP documentation (such as decision guides and critical limits).

Any amendments or updates will be communicated to suppliers by Forum members and an appropriate lead time given to permit implementation of the revised standard.

Resources

To assist producers meet the requirements of Salad GAP a number of resources have been developed in addition to these guidelines:

- Salad GAP Records
- Training guides and notes
- Guidelines for sampling for microbial analysis
- CD including all of the above

Fresh Salad Producers' Forum staff will also be able to assist producers work through Salad GAP.

Salad Good Agricultural Practices

1. New Sites

Some production sites may not be suitable for the production of salads. As part of business planning, assessment of the suitability of new sites should be undertaken as early as possible. This will allow time to rectify issues or to find other sites to meet production needs.

- Ensure any local, state or federal government planning approvals or restrictions have been identified before proceeding with more detailed site analysis.
- Work through the *Decision Guide – Site assessment* for each new site.
- Complete the *Decision Guide Record – Site assessment* for each new site.
- Maintain any other records needed to show you meet the requirements of the Decision Guide.

Decision Guide - Site assessment

Has land been used for livestock production in the last 12 months?

Y → **HIGH RISK**

- ✓ A **12 month exclusion period** is required before commencing salad production

If you are commencing salad production within 24 months of removing livestock for the site, you must ensure:

- ✓ All relevant members of the Fresh Salad Producers' Forum are aware of your intention to plant salad vegetables. Maintain records of these conversations.
- ✓ Land is subject to multiple workings and irrigation to maximise opportunity to kill any potential human pathogens.
- ✓ Before planting with salad crops, soil is sampled according to the *Salad GAP guidelines for sampling soil for microbial analysis* and must be found to have E. coli <10/g, Salmonella Not Detected / 25g.
- ✓ At least one sample of product must be collected, according to the *Salad GAP guidelines for sampling product for microbial analysis* and must be found to have E. coli <10/g, Salmonella Not Detected / 25g
- ✓ Additional microbiological testing of product may be required. The number of tests, frequency and duration of testing to be agreed in writing with each relevant Fresh Salad Producers' Forum member before undertaking any testing.

N ↓

Is there potential for cadmium contamination of leafy green salad vegetables or root crops?

The likelihood of this is increased if irrigation water is salty or soil is:

- very sandy
- alkaline or acidic
- low in zinc
- low in organic matter

Complete Decision Guide Record – Site assessment

N ↓ / Y → **HIGH RISK**

- ✓ An analysis of cadmium levels in product is needed.
- ✓ Check whether Fresh Salad Producers' Forum members have tested your product for cadmium. If so obtain a copy. If not, test product for cadmium. The maximum level permitted for salad vegetables is 0.1mg/kg (Food Standards Code 1.4.1)
- ✓ If the product test results are less than half the legal limit, retest every 3 years. If the product test results are greater than half the legal limit, retest every year.
- ✓ If the product test results exceed the legal limit, immediately advise all relevant customers of the result.
- ✓ Leafy green salad production at this site should not continue.

Is there potential for lead contamination of leafy green salad vegetables and root crops?

Was the site ever:

- an orchard
- treated with sewage sludge
- a rifle range, military firing range or ordnance site?

Is the site:

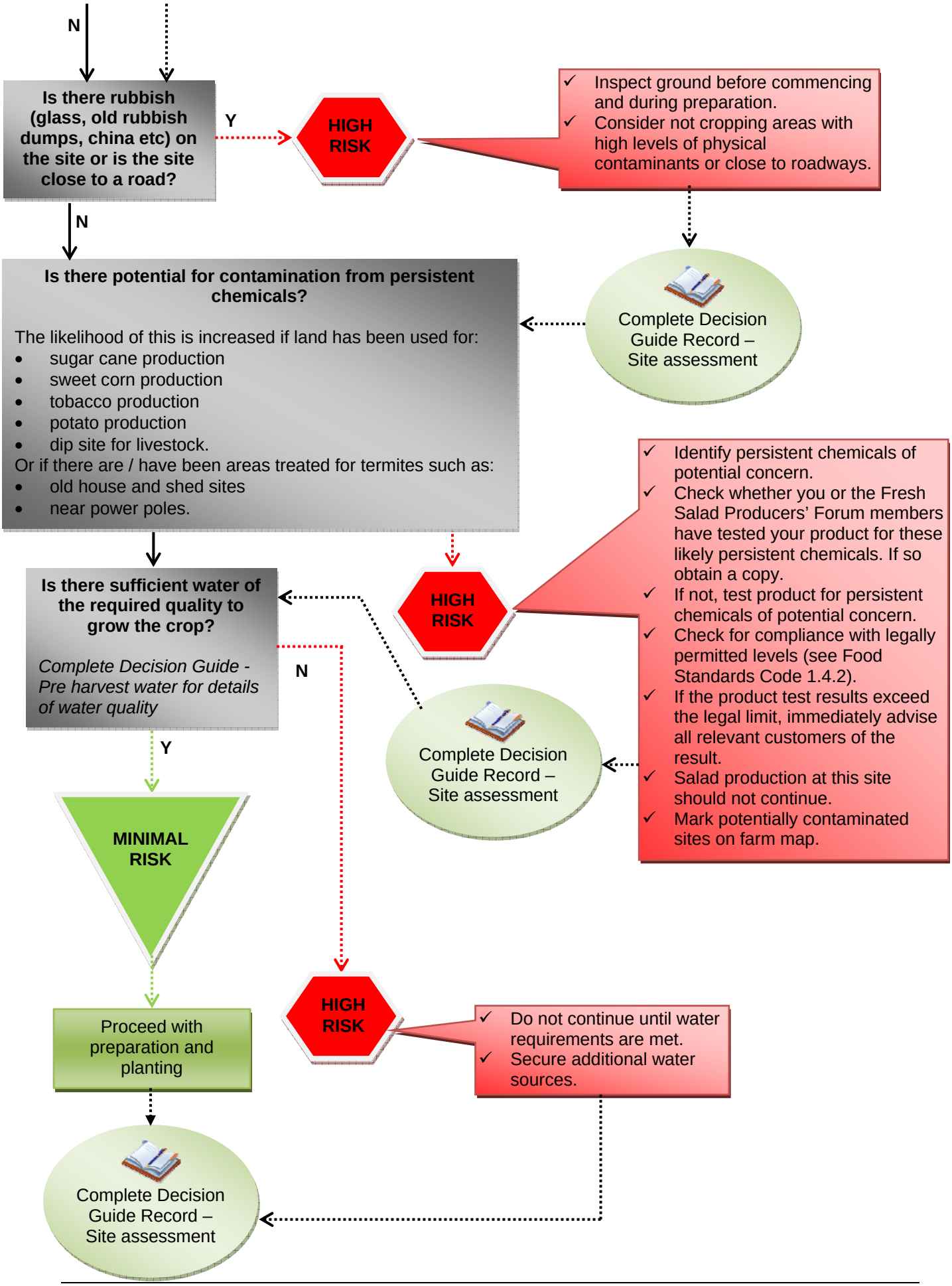
- near buildings with weathered exterior paint
- within 20m of a busy road?

Complete Decision Guide Record – Site assessment

N ↓ / Y → **HIGH RISK**

- ✓ Soil tests for lead can be undertaken prior to planting in areas considered at risk
- ✓ If soil lead levels exceed 400ppm further technical advice is recommended.
- ✓ An analysis of lead levels in product is needed.
- ✓ Check whether Fresh Salad Producers' Forum members have tested your product for lead. If so obtain a copy. If not, test product for lead. The maximum level permitted for vegetables is 0.1mg/kg (Food Standards Code 1.4.1)

Complete Decision Guide Record – Site assessment


N
Is there rubbish (glass, old rubbish dumps, china etc) on the site or is the site close to a road?
Y
HIGH RISK
✓ Inspect ground before commencing and during preparation.
✓ Consider not cropping areas with high levels of physical contaminants or close to roadways.
N
Is there potential for contamination from persistent chemicals?
The likelihood of this is increased if land has been used for:
• sugar cane production
• sweet corn production
• tobacco production
• potato production
• dip site for livestock.
Or if there are / have been areas treated for termites such as:
• old house and shed sites
• near power poles.
Complete Decision Guide Record – Site assessment
HIGH RISK
✓ Identify persistent chemicals of potential concern.
✓ Check whether you or the Fresh Salad Producers' Forum members have tested your product for these likely persistent chemicals. If so obtain a copy.
✓ If not, test product for persistent chemicals of potential concern.
✓ Check for compliance with legally permitted levels (see Food Standards Code 1.4.2).
✓ If the product test results exceed the legal limit, immediately advise all relevant customers of the result.
✓ Salad production at this site should not continue.
✓ Mark potentially contaminated sites on farm map.
Is there sufficient water of the required quality to grow the crop?
Complete Decision Guide - Pre harvest water for details of water quality
N
Y
Complete Decision Guide Record – Site assessment
MINIMAL RISK
HIGH RISK
✓ Do not continue until water requirements are met.
✓ Secure additional water sources.
Proceed with preparation and planting
Complete Decision Guide Record – Site assessment

2. Fertiliser

2.1 Non-synthetic fertiliser

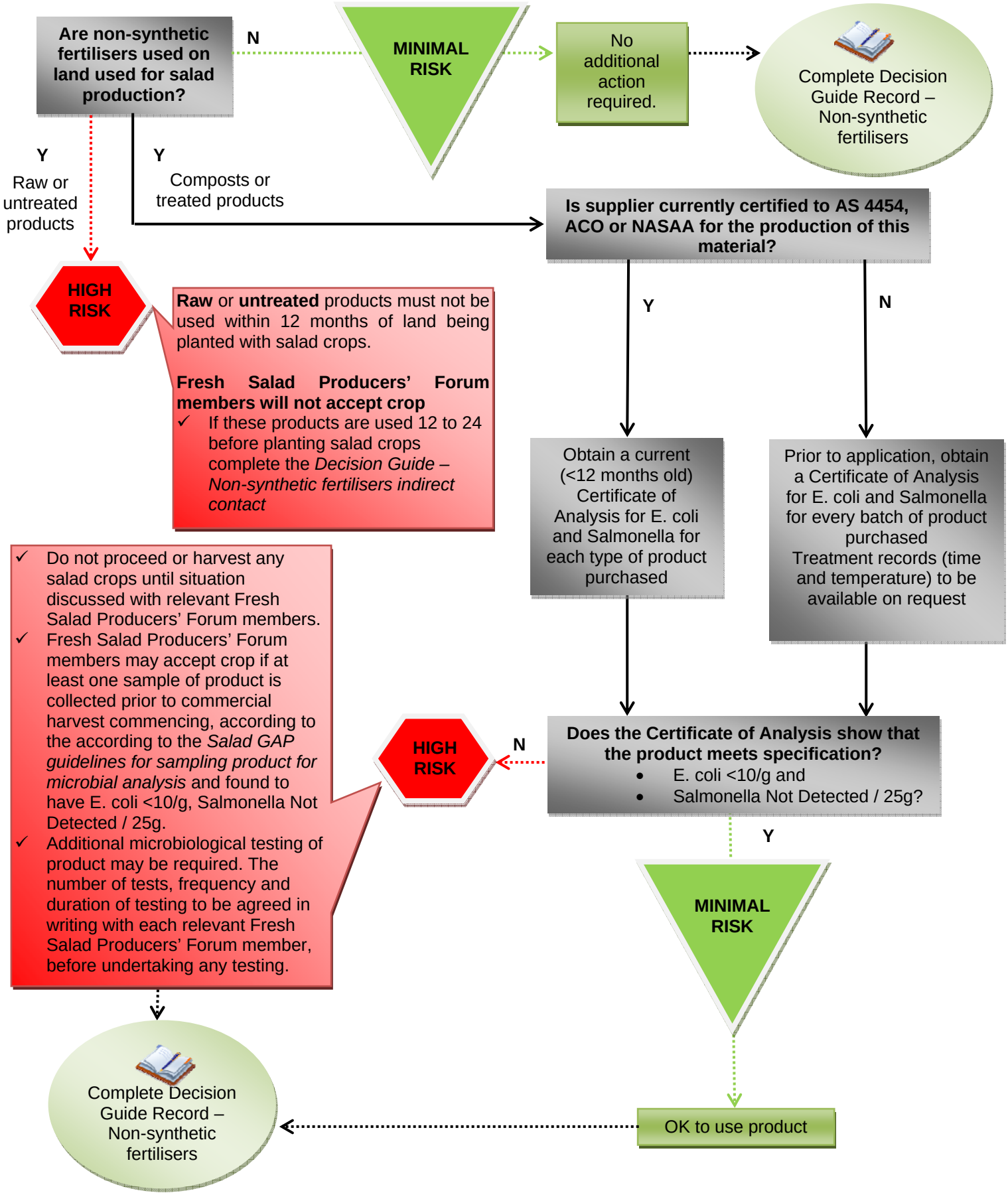
Once salad vegetables are contaminated, removing or killing pathogens is difficult and there are reports of pathogens actually being internalised in some lettuce varieties. Therefore minimising contamination is the first line of defence in ensuring food safety of salad vegetables.

Controls over the use of these products are necessary as they may represent a significant food safety risk for salad production due to the presence of significant human pathogens. Research has shown that some human pathogens can survive in soil treated with manure for months and even years, particularly if conditions remain moist and mild.

The requirements of Salad GAP are:

- Do not use raw manure or human biosolids.
- Work through the *Decision Guide – Non-synthetic fertiliser* for each non-synthetic fertiliser used.
    - Be sure to complete this for any new non-synthetic fertilisers you are considering using in future.
- Complete the *Decision Guide Record – Non-synthetic fertiliser* for each non-synthetic fertiliser used.
- Work through the *Decision Guide – Non-synthetic fertiliser indirect contact*.
- Complete the *Decision Guide Record – Non-synthetic fertiliser indirect contact*.
- Maintain any other records needed to show you meet the requirements of the Decision Guides.
- Maintain accurate records for all non-synthetic fertiliser applications, including:
    - Date of application
    - Time of application
    - Product(s) used
    - Batch number(s)
    - Location / block / bed
    - Wind speed and direction
    - Post application incorporation details (what was done and when).
- Ensure any non-synthetic fertiliser stored on site does not contaminate salad.
    - Storage area should be physically isolated.
    - Position of storage should consider prevailing wind direction, potential for run off following rain, ways of preventing run off from entering waterways / contacting salad crops / growing areas and ways of preventing leaching into ground water supplies.
- Ensure equipment used to apply non-synthetic fertilisers is thoroughly cleaned and sanitised after use or is dedicated for this purpose. Details of cleaning must be documented (see section 7. Cleaning for further information).

Decision Guide - Non-synthetic fertilisers



Decision Guide - Non-synthetic fertilisers indirect contact

Are non-synthetic fertilisers applied to crops other than salad crops or to land that will be used for salad production?

N → **Are non-synthetic fertilisers used on neighbouring properties?**

N → **MINIMAL RISK** → No additional action required

Y → **MODERATE RISK**

- ✓ Ensure an adequate buffer zone is in place to prevent contamination of adjacent crops
- ✓ Do not spread if more than a light breeze* blowing towards areas where you are or plan to grow salad
- ✓ Material to be incorporated or watered in as soon as possible after application

MODERATE RISK

Discuss with neighbours and request:

- ✓ an adequate buffer zone be put in place to prevent contamination of your adjacent crops
- ✓ not to spread if more than a light breeze* blowing in the direction of your property (specifically areas where you are or plan to grow salad)
- ✓ material to be incorporated or watered in as soon as possible after application

Complete Decision Guide Record – Non-synthetic fertilisers indirect contact

Raw manures or untreated products applied within 12 months of land being planted with salad crops?

N → **MINIMAL RISK** → No additional action required

Y → **HIGH RISK**

- ✓ A **12 month exclusion period** is required before commencing salad production

If you are commencing salad production within 24 months of applying raw or untreated products, you must ensure"

- ✓ All relevant members of the Fresh Salad Producers' Forum are aware of your intention to plant salad vegetables. Maintain records of these conversations.
- ✓ Land is subject to multiple workings and irrigation to maximise opportunity to kill any potential human pathogens.
- ✓ Before planting with salad crops, soil is sampled according to the *Salad GAP guidelines for sampling soil for microbial analysis* and must be found to have E. coli <10/g, Salmonella Not Detected / 25g.
- ✓ At least one sample of product must be collected, according to the *Salad GAP guidelines for sampling product for microbial analysis* and must be found to have E. coli <10/g, Salmonella Not Detected / 25g.
- ✓ Additional microbiological testing of product may be required. The number of tests, frequency and duration of testing to be agreed in writing with each relevant Fresh Salad Producers' Forum member before undertaking any testing.

Complete Decision Guide Record – Non-synthetic fertilisers indirect contact

** signs of a light breeze include leaves rustling and wind felt on face. If leaves and twigs are in constant motion wind speed is too great*

2.2 All Fertilisers

- Ensure accurate placement of fertiliser.
    - Adjust spreader to prevent placement on non target areas.
    - Take account of the effect of wind on the distribution of different types of fertiliser.
    - When applying fertilisers to crops adjacent to salad, spread when wind is blowing away from salad if non target application is likely.
- Incorporate / irrigate as soon as possible after application.
- If fertiliser is present at time of harvest, advise relevant Fresh Salad Producers' Forum members and agree a course of action, which may include:
    - Postponing or cancelling harvest
    - Taking action to remove contamination from product, such as irrigating before harvest, washing product postharvest.

3. Water

Direct and indirect contact with water has the potential to contaminate salad vegetables. The most obvious means of direct contamination is through water used after harvest, but water used during the growth of the crop can also cause product contamination. Indirect contamination can take place by using contaminated water for equipment or hand washing. Therefore water quality needs to be monitored and water sources need to be managed to minimise the chances of them becoming contaminated.

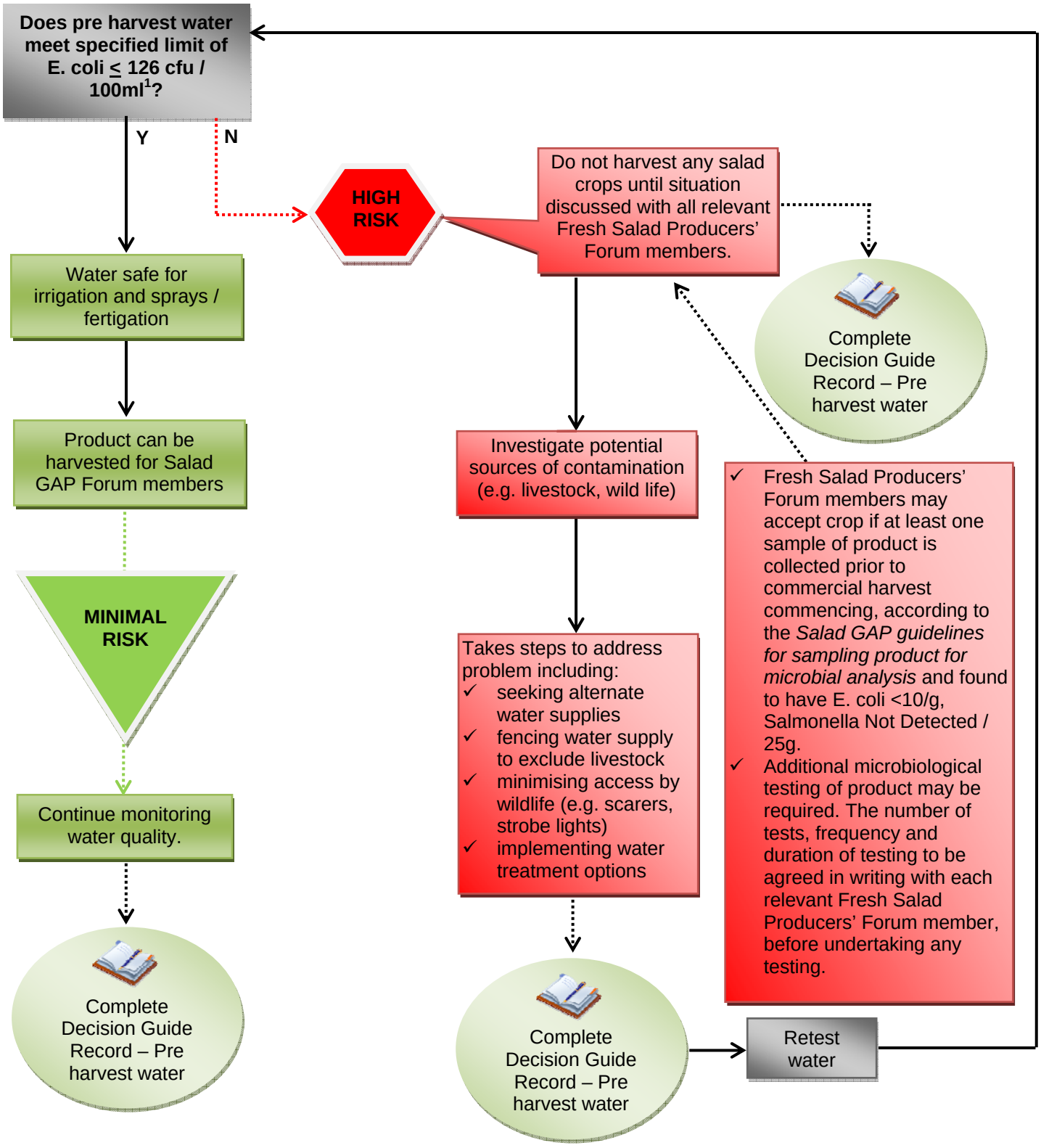
3.1 Pre harvest water

- Work through the *Decision Guide - Pre harvest water*.
- Complete the *Decision Guide Record - Pre harvest water* for each water source used.
    - Be sure to complete this for any new water sources you are considering using in future.
- Maintain any other records needed to show you meet the requirements of the Decision Guide.
- If using multiple water sources, ensure each is worked through the Decision Guide and that records exist to trace water used to particular crops.
- Regularly monitor water quality.
    - Before using new water sources water must be tested on a monthly basis for 12 months. Testing must then continue annually at the time of greatest risk, based on the historical water test results. The time of greatest risk is the time when the highest levels of E. coli are found in water.
    - For existing water sources, test quarterly until results are available for at least a 12 month period. Continue to test at least annually at the time of greatest risk. The time of greatest risk is the time when the highest levels of E. coli are found in water.
    - Additional tests must be undertaken in the event of an extreme event (e.g. flood, drought) or likely case of contamination of the water supply. In this instance, do not harvest any salad crops until results are available and meet specifications.
- Follow the *Salad GAP guidelines for water sampling for microbial analysis* (see Appendix 1) or the procedure supplied by the laboratory. Collect water sample from as close as possible to the “point of use” (for example from the sprinkler head).
- Ensure water sources are, as far as is practicable, protected from potential contaminants. For example consider the impacts of:
    - Run-off from paddocks with livestock
    - Run-off from roadways
    - Upstream livestock operations
    - Chemical storage, mixing and machinery washing areas
    - Floods, storms and other extreme events
- Where you have control of livestock movements, prevent their direct access to water sources.
- Take reasonable steps to secure water sources on your property from human interference, for example a sign on the fence prohibiting entry.
- Where water sources are or can be connected, ensure movement of water is controlled (for example, gate valves are locked).

- Mark on a farm map the location of:
    - Surface water (dams, irrigation channels, weirs, streams / rivers)
    - Ground water and extraction points (bores)
    - Town / reclaimed water supplies
    - Drainage lines and other significant water run-off areas and discharge points (i.e. where water enters the property, water movement within the property, and where water leaves the property)
    - Septic tanks and septic tank outlets.

Decision Guide - Pre harvest water

Good agricultural practices must be in place regardless of initial water quality. These practices are designed to minimise the risk of contamination of product, not as corrective actions once a problem is found.



[1] ***Guidance note on pre harvest water limit***
In 1998 the US Food and Drug Administration (FDA) issued its "Guide to Minimise Microbial Food Safety Hazards for Fresh Fruits and Vegetables". The practices outlined within this document provided guidance on critical production steps where food safety might be compromised during the growing, harvesting, transportation, cooling, packing and storage of fresh produce. In response to continual concerns regarding the microbial food safety of fresh produce, the Commodity Specific Food Safety Guidelines for the Production and Harvest of Lettuce and Leafy Greens were produced. Within this document, acceptance criteria for pre-harvest water have been established at E. coli ≤ 126cfu/100ml.

The Fresh Salad Producers' Forum has considered this limit in light of the research and development and verification processes in place.

Review has occurred of pre harvest water E. coli levels across a variety of source waters including bore, dam and channel water across four seasonal profiles in Victoria, Western Australia, Queensland and Tasmania. The numbers have been reviewed for the presence of E. coli in pre harvest water sources and how this translates to presence on raw material and washed ready to eat product.

Evidence collated by the Fresh Salad Producers' Forum validates the use of the acceptance criteria limit of E. coli ≤ 126 cfu/100ml provided by the Commodity Specific Food Safety Guidelines for the Production and Harvest of Lettuce and Leafy Greens, 2007.

3.2 Bores

- Maintain bores in good condition.
- Ensure bores are not positioned close to sources of contamination (no closer than 33m from watertight septic tank or subsurface sewage leaching field or animal enclosure, 20m from any sewer, 50m from cesspool or seepage pit).
- Position bore upslope from other potential contaminants (fertiliser, pesticide and fuel storage and handling areas).
- Divert surface water away from bores.
- Disinfect bores if E. coli levels exceed limits specified for pre harvest water sources and retest.

3.3 Recycled or reclaimed water

It is important to realise that the treatments applied by salad processors do not definitively remove contamination. Therefore only the highest quality recycled water should be used.

- Obtain documentation from suppliers of recycled water that clearly shows the water supplied meets the specifications for water for use on commercial food crops **consumed raw or unprocessed** (defined in the Australian Guidelines for Water Recycling as log reductions of 6, 5 and 5 for viruses, protozoa and bacteria respectively. The water quality objective of treatment is E. coli < 1/100ml).
- Water to be tested each month during use. Any detection of E. coli must be reported to the water supplier and relevant members of the Fresh Salad Producers' Forum as soon as possible and product must not be supplied to Fresh Salad Producers' Forum members until their agreement is received in writing.
- Follow the *Salad GAP guidelines for water sampling for microbial analysis* (see Appendix 1) or the procedure supplied by the laboratory. Collect water sample from as close as possible to the "point of use" (for example from the sprinkler head).

Photo courtesy of Arris Pty Ltd

3.4 Postharvest water

- Any water contacting product postharvest must be potable (<1 E. coli/100mls). This includes water used to aid cooling or prevent product dehydration (for example vacuum coolers, hydro-coolers, ice slurries).
- Water to be tested each month during use.
    - A sampling schedule must be developed and followed, ensuring that samples are collected from a range of outlets over the course of a 12 month period.
    - Any detection of E. coli must be reported to the water supplier and relevant members of the Fresh Salad Producers' Forum as soon as possible and product must not be supplied to Fresh Salad Producers' Forum members until their agreement is received in writing.
- Appropriate treatment specifications:
    - Water sprayed onto product or product contact surfaces must achieve greater than or equal to 1ppm Free Available Chlorine (FAC) and pH 6.5 – 7.5.
    - Water used for washing or immersion must achieve 50-100ppm Free Available Chlorine (FAC) or ORP greater than or equal to 650mv and pH 6.5 – 7.5.
    - Chlorine levels and pH should be monitored at least every 2 hours during use.
    - If you use other than chlorine, obtain information regarding dosage rates and any other key criteria.
        - Members of the Fresh Salad Producers' Forum may be able to provide further technical assistance regarding water treatment options.
    - Records of water treatment must be kept.
    - Use of any postharvest treatments must comply with regulatory requirements.
    - Verify efficacy of water treatment at least monthly.
    - Undertake microbiological tests (target is <1 E. coli/100mls) of water post treatment and before contact with product.
- Follow the *Salad GAP guidelines for water sampling for microbial analysis* (see Appendix 1) or the procedure supplied by the laboratory.

4. Chemicals

Chemical contamination of salads can be due to agricultural chemicals, heavy metals or persistent chemicals in the soil.

Contamination from agricultural chemicals is generally related to inappropriate application and handling of these chemicals. Spray drift is also a potential cause of chemical contamination.

Heavy metals of concern include cadmium and lead, with root and tuber vegetables and leafy vegetables being particularly at risk. They may occur naturally in the soil, or they can be introduced through additives like fertilisers and soil additives. Cadmium is mobilised and uptake increases where soils are very sandy, saline or acidic, low in zinc or organic matter and if irrigation water is salty. Vegetables can absorb lead from contaminated soils. Lead levels in soil can be increased due to contamination from sources such as lead-based paints (around old house sites), car emissions (even though unleaded fuels are now used, contamination can persist) or agricultural chemicals (former orchard sites).

Persistent chemicals are generally either organochlorines (OC) or organophosphates (OP) and may be present on farms due to past use, dumping or spillage. Some of these chemicals were used extensively in livestock dips and in some states power poles were treated to protect from white ant or termite attack. Salad crops could be contaminated by these chemicals as they attach to soil particles which can then attach to product. Root or tuber vegetables are at greater risk of contamination. More modern (post ~1970's) organophosphate pesticides are not considered persistent as they readily decompose.

4.1 Agricultural chemicals

- Purchase chemicals from AgSafe accredited suppliers or similar.
- Ensure staff handling and using agricultural chemicals are appropriately trained either externally, or by competent staff. As a minimum requirement, the person responsible for the supervision of use of farm chemicals, must have successfully completed recognised chemical user's training.
    - In some states a Chemical Use and Handling certificate is required for anyone handling or applying agricultural chemicals, in others it is sufficient that these activities are overseen by someone with the certificate. Either way a record of training is required.
- Ensure a current copy of label or permit is available (refer to http://www.apvma.gov.au/permits/permits.shtml). Note that in Victoria off-label use is allowed under certain circumstances – see Agriculture Note AG1214 for more information.
- Ensure chemical application meets all legal requirements.
    - Chemicals used at correct rate (as detailed on label or in permit).
    - Registration and permit requirements must be followed (in Victoria off-label use is allowed under certain circumstances).
- Abide by withholding period.
- Do not apply chemicals in conditions where off target application is likely.
- Ensure copies of Material Safety Data Sheets (MSDS) are available for all agricultural chemicals used or stored on site.

- Ensure chemical storage, mixing and disposal facilities are located to minimise risk of contamination of product from runoff or direct contact.
- Store agricultural chemicals in a chemical storage area that is:
    - structurally sound
    - secure (to restrict access to unauthorised personnel)
- Store agricultural chemicals according to their label directions, in their original containers (or a suitable alternative in the case of breakage) and with legible labels attached.
- Keep a spill kit (shovel, bucket, absorbent material such as kitty litter or sand) in the chemical storage area.
- Store empty agricultural chemical containers in a manner which does not pose a risk to product from run off or direct contact.
- Dispose of empty chemical containers through appropriate collection programs, such as DrumMuster®.
- Store unusable agricultural chemicals (i.e. no longer registered, passed expiry date) in a designated area in store so they are not accidentally used. Ensure this area has adequate signage (i.e. “Do not use – awaiting disposal”).
- Dispose of unusable agricultural chemicals through appropriate collection programs, such as ChemClear®.
- Ensure spray rig rinsate is disposed of in a manner which does not pose a risk to product from run off or direct contact.
- Undertake residue tests at least annually.
    - Maintain records of residue testing.
    - Check any residues found on product do not exceed the Maximum Residue Limits (MRLs).
    - Advise all relevant customers if MRLs are exceeded.

4.2 Heavy Metals

- Work through the *Decision Guide – Site assessment* for cadmium and lead for all areas where leafy green vegetables or root crops are being grown.
- Complete the *Decision Guide Record – Site assessment* for cadmium and lead.
    - Be sure to complete this for any new sites you are considering using in future.
- Maintain any other records needed to show you meet the requirements of the Decision Guide.

4.3 Persistent chemicals

- Work through the *Decision Guide – Site assessment* for all salad production areas.
- Complete the *Decision Guide Record – Site assessment*.
    - Be sure to complete this for any new sites you are considering using in future.
- Maintain any other records needed to show you meet the requirements of the Decision Guide.
    - If product residue tests are required check that Maximum Residue Limits (MRLs) are not exceeded.
    - Advise all relevant customers if MRLs are exceeded.

4.4 Other chemicals

- Apply slug and mouse pellets / baits in accordance with label.
- Do not apply slug pellets or mouse baits to the edible parts of the crop or use application methods where pellets / baits may be collected (lodged) with harvested material or contaminate packaging / harvest equipment.

5. People

The health and hygiene of staff and visitors directly impacts the food safety of product as human pathogens and other contaminants can be transmitted by hand contact or by sneezing, coughing or spitting (or worse) on product. Staff and visitors can also inadvertently be responsible for physical contamination of product by taking items out into the paddock / field / garden. Adequate facilities must be provided for staff and visitors, such as toilets and hand washing facilities, and there must be designated areas for eating and smoking. Staff and visitors can also introduce contaminants on their clothing or vehicles, so care is required in this regard as well.

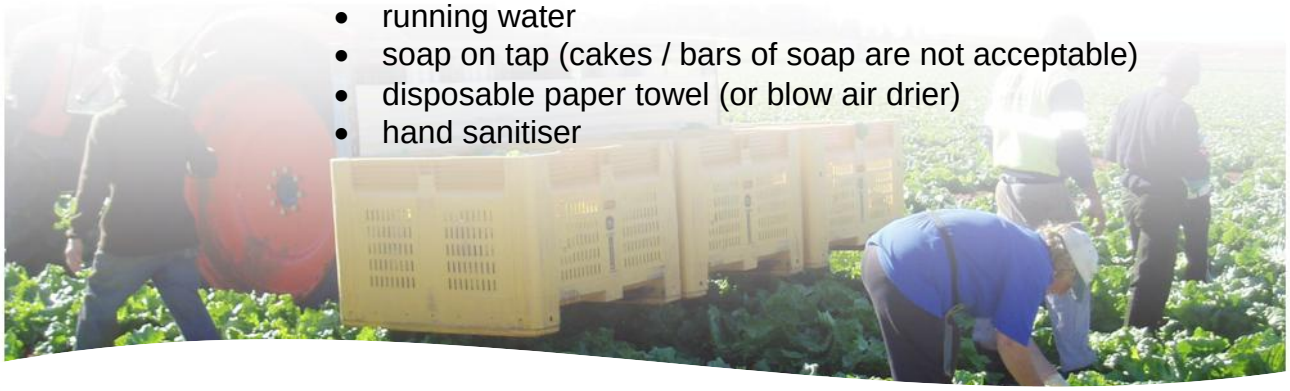
5.1 Staff

General

- All staff, including casuals, must be trained in Salad GAP food safety and personal hygiene requirements.
- Training materials should be available in relevant languages and/or pictorially. A translator may be required.
    - A *Training Guide* and a *Visual training guide* have been developed for Salad GAP and should be used to assist in staff training. These documents detail the minimum acceptable standards for training.
- Training records must be maintained and must specifically cover Salad GAP food safety and personal hygiene requirements.
    - The *Training Record* may be used for this purpose.
- All key personnel must be trained in product specifications and the requirements of this document.
- A policy addressing return to work following illness must be available and staff must be aware of its requirements.

Food safety and personal hygiene

- Smoking and eating may only take place in crop free areas.
    - Controls need to be put in place to manage storage of staff food while working and removal of rubbish (including cigarette butts).
    - Hand washing facilities must be provided for use after eating or smoking.
- Spitting is prohibited.
- Toilet facilities must be available for all staff, including those involved with field activities.
    - Toilet facilities must be used.
- Where necessary portable toilets must be available and must be placed in locations that minimise risk to product and maximises accessibility.
    - Portable toilets must be maintained, cleaned and emptied of waste in a manner that does not present a risk to product.
- All toilet facilities must be:
    - Regularly maintained and sanitised.
    - Equipped with hand washing facilities:
        - running water
        - soap on tap (cakes / bars of soap are not acceptable)
        - disposable paper towel (or blow air drier)
        - hand sanitiser



- Hands to be washed after using the toilet, smoking or eating.
- If wearing gloves, they must be removed before using the toilet, smoking or eating.
- If non disposable gloves are used in roles where there is direct product contact they must be washed and sanitised at least daily.
    - These gloves must be dry before reuse.
- No visible jewellery is to be worn, with the exception of plain wedding bands and sleeper earrings.
    - Any visible stud earrings or body piercings that cannot be removed must be taped or covered with a blue bandaid.
    - Necklaces must be removed or completely covered by clothing.
- All staff to wear caps or hair to be tied back and contained.
    - A baseball cap or similar is sufficient, hair nets are not required.
    - Head wear must be subject to regular washing or disposal.

- Clothing must not be ripped or torn and must be visually clean at the beginning of the day / prior to commencing harvest or any product handling activity.
    - Ideally all outer clothing above waist height should not have external pockets.
    - Footwear, including gumboots, should be cleaned as necessary to ensure product is not contaminated and that it does not pose an insect, biosecurity, weed or disease threat.
- All open wounds must be covered with a clean waterproof dressing.
    - All dressings must be changed at least daily.
    - Only blue dressings are permitted in food handling roles.
    - It is preferable that staff with wounds also wear non latex disposable gloves.
- Staff are required to report illness (such as symptoms of nausea, vomiting, diarrhoea) and will be given non-food contact jobs.
    - Supervisors have authority to reassign staff who appear to be ill to non-food contact roles. These staff must be excluded from roles involving product or packaging and, as much as is practicable, separated from other staff involved with product handling.
- All staff, including casuals, must understand the requirement for product to be free from physical contamination. Staff must understand what constitutes physical contamination, for example:
    - Weeds
    - Insects
    - Frogs and other animals
    - Glass
    - Hair (human or animal)
    - Cigarette butts
    - Knives
    - Keys
    - Plastic of all types
    - Blades
    - Tree seeds
    - Rubber
    - Nuts, bolts and oil from machinery
    - Fencing wire
    - Foreign bodies in soil
    - Nails
- Rubbish must not be left in the paddock / field / garden.
- With the exception of supervisors, and emergency situations, pens, pencils, mobile phones and other similar items must not be taken into the paddock / field / garden.
- Personal items must be kept in staff room or other designated area unless specifically approved by a supervisor.
- No personal items (other than plastic bottles containing water) to be taken into paddock / field / garden.
- Supervisors and key harvest staff must be aware of the food safety risk posed by certain weeds and have the ability to identify them:
    - Stinging nettles – can cause anaphylactic response.
    - Thorns
    - Deadly nightshade

5.2 Visitors

- Farm biosecurity measures must be in place.
    - Where possible, restrict visitor and visitor vehicle access to production areas.
    - Visitors are to make an appointment / telephone before entering property.
    - There is a requirement for agronomists, company representatives and field officers to ensure vehicles, clothing and boots are practically clean or access must be restricted.
- All visitors must abide by the same food safety and personal hygiene requirements as staff if handling product or entering paddock / field / garden or packing or production areas.

6. Paddock Hygiene

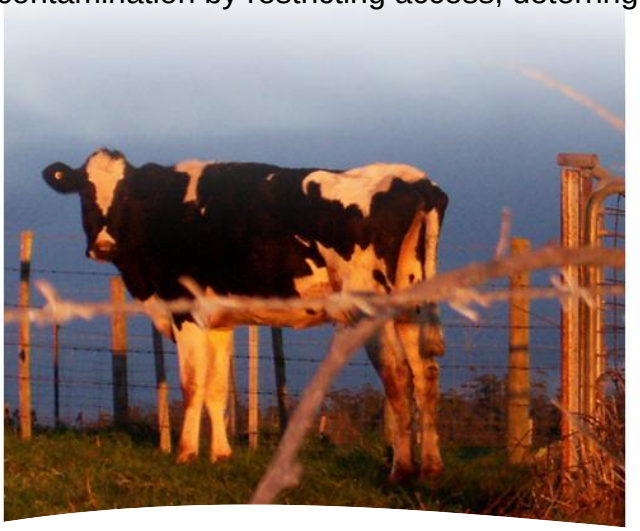
6.1 General

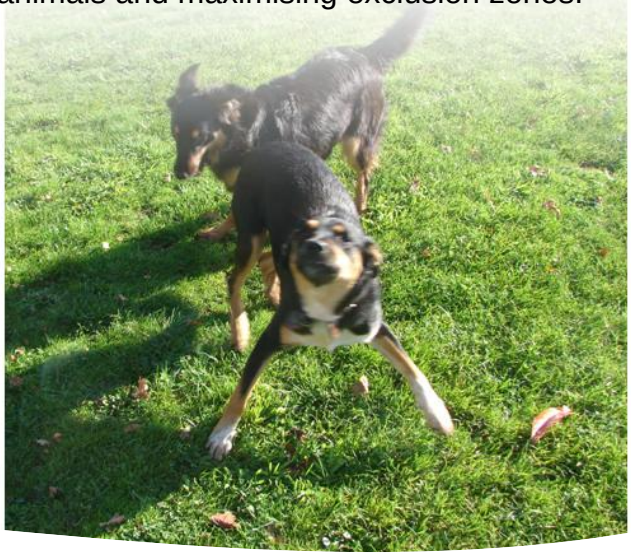
- Complete the *Salad GAP Pre harvest checklist* or equivalent each day before commencing harvest.

6.2 Animals

Animals can be a major potential source of human pathogens. Transmission of these pathogens has been documented from wild animals, including rodents, birds and even flies. Commercially kept animals such as pigs, cattle, sheep, goats, horses and poultry also present a significant risk.

Complete exclusion of all animals from production areas and water sources is an unrealistic expectation. However all practical steps should be taken to minimise the risk of contamination by restricting access, deterring animals and maximising exclusion zones.





- Production sites must be maintained in a manner which restricts access by:
  - domestic animals (including the boss's dog)
  - livestock
  - wild animals and birds
- Specific control measures may include:
  - Maintain fences and other physical barriers to minmise intrusion.
  - Maintain an area of cleared land between bush and production areas. Minimum width should be sufficient to allow a vehicle (tractor or 4WD) to travel through unimpeded.
  - Avoid attracting birds (for example by inadvertently providing food). Where necessary install bird scarers / strobe lights.
  - Maintain minimum distances to livestock (10m). If livestock are uphill from production areas and there is potential for water run off through or from grazing paddocks, increase the distance and / or install diversions such as ditches, drains and grassed areas to minimise run off reaching crop.
  - Where you have control of livestock movements, prevent their direct access to pre harvest and postharvest water sources.

- If animals or significant numbers of birds do enter paddock / field / garden:
    - Do not harvest any product that has come in direct contact with faecal material.
    - Do not harvest any product that has come in direct contact with dead bird / animal material.
    - Carefully remove dead birds / animals from paddock / field / garden (minimise risk of contaminating product while removing dead bird / animal).

6.3 Weeds

Control of weeds is particularly important in lettuce, baby leaf and herb crops as weeds may be harvested with these leafy green vegetables and are then difficult to remove and may cause illness if eaten.

- Minimise risk of physical contamination of produce harvested by ensuring appropriate weed control during crop production, particularly those with the potential to cause anaphylactic response or poisoning.
- Inspect the crop for areas of high weed infestation.
    - Identify and do not harvest these areas, or determine if an alternative harvest method is more appropriate (for example hand harvest these areas rather than machine harvest).
- Complete the *Salad GAP Pre harvest checklist* or equivalent, detailing any actions taken to minimise the risk of weed contamination.

6.4 Insects

- Minimise risk of physical contamination by ensuring appropriate insect control during crop production.
- Inspect the crop for areas of high insect populations.
    - Identify and do not harvest these areas, or determine if an alternative harvest method is more appropriate (for example hand harvest these areas rather than machine harvest).
- Complete the *Salad GAP Pre harvest checklist* or equivalent, detailing any actions taken to minimise the risk of insect contamination.

6.5 Frogs

There is a risk of frogs being inadvertently “collected” during harvesting of salad crops and therefore finding their way into processed product. While not specifically a food safety hazard, the presence of frogs in finished product may result in serious customer complaints and media attention.

- Minimise risk of frogs being harvested with salad by implementing appropriate control methods.
- Inspect the crop for frogs before harvest.
    - Identify and do not harvest from areas where there is evidence of frogs, or determine if an alternative harvest method is more appropriate (for example hand harvest these areas rather than machine harvest).
- Complete the *Salad GAP Pre harvest checklist*, detailing any actions taken to minimise the risk of frog contamination.

6.6 Floods

Flood waters can bring in a variety of contaminants: human pathogens, physical and chemical contamination.

- Do not harvest product that has been in direct contact with flood water.
- Create a 10m wide buffer zone around the flooded area.
- Do not harvest from the buffer zone.
- Minimise the risk of contamination from flooded area and buffer zone.
    - Do not drive harvest equipment through these areas.
    - Restrict staff access to these areas.
    - Clean and sanitise any equipment that may have contacted soil in the flooded area.
- Do not replant flooded areas for at least 60 days after water has subsided.
- Complete the *Decision Guide Record - Pre harvest water* before using any water affected by the flood (such as river or stream water or water caught in dams).
- Maintain any other records needed to show you meet the requirements of the Decision Guide.
- Maintain records of location and extent of flooding.

7. Cleaning

Dirty equipment can contaminate product. All reasonable steps should be taken to minimise the risk of contamination by maintaining equipment in good condition and cleaning regularly.

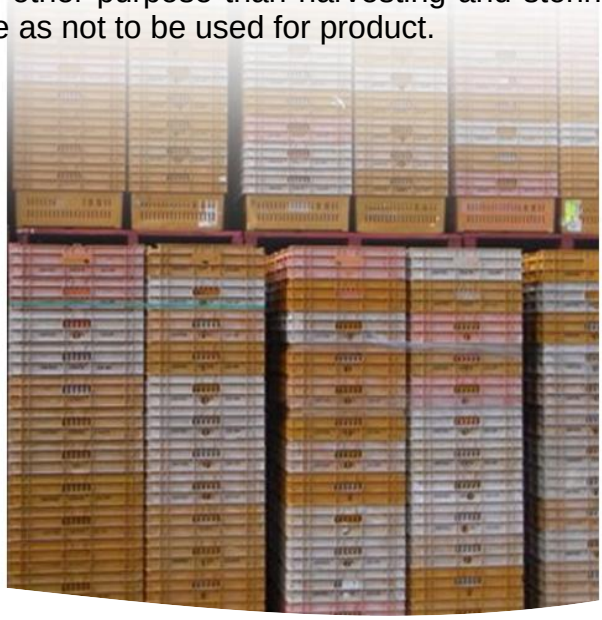
- A cleaning schedule, detailing:
  - Item to be cleaned
  - Method of cleaning
  - Frequency of cleaning
  - Rates of chemicals used
  - Responsibility for cleaning

  must be in place for items that contact salad, including:
  - Knives
  - Blades
  - Belts and food contact surfaces
  - Bins, crates and tubs
- The cleaning schedule must also include 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 must be food grade and a Material Safety Data Sheet (MSDS) must be available.
- 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 (see section 9. Suppliers for further information).
- Any item that is visibly unclean should 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 maintained and must include details of:
  - Item cleaned
  - Method of cleaning
  - Date cleaned
  - Rate of chemicals used
  - Name of person completing cleaning

8. Equipment

Equipment used in the production and harvest of salads must be maintained. Pieces of wood, plastic and metal are all physical contaminants that must not find their way into finished product.

- Use equipment that is made of non-toxic substances and is able to be easily cleaned.
- Irrigation equipment must be stored in a manner that minimises the chances of contamination.
- If possible ensure lines are free from water at the end of the season / prior to storage.
- Commission equipment at the beginning of the season or after periods of non-use (i.e. flush lines out before first irrigation).
- If using equipment such as transportable water tanks or fertigation equipment for irrigation, flush out with appropriate water before use.
- All field harvest, postharvest handling, storage and cooling equipment must be regularly maintained to minimise the potential for breakdown, leakage or malfunction.
    - Blades and belts must be checked every day when cleaning.
    - Damaged or worn blades must be replaced.
    - Leaking hoses must be repaired or replaced.
    - Broken headlights, glass and hard plastics must be replaced.
- Inspect all bins, crates and tubs for damage, splits and breakage before and during use. Isolate and do not use damaged equipment.
- If equipment is found to be damaged or to have parts missing that could have contaminated product, relevant Fresh Salad Producers' Forum members are advised so that additional care can be taken when processing potentially contaminated product.
- Wherever possible, for field equipment like harvesters and spray equipment, place engines, hoses etc over wheel runs.
- Store bins, crates and tubs to minimise contamination, particularly from dirt, dust and vermin.
- Do not use bins, crates or tubs for any other purpose than harvesting and storing salad, unless they are clearly identifiable as not to be used for product.



9. Suppliers

- Ensure that suppliers of goods or services that can affect food safety of product are aware of their responsibilities and that 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
- Document specifications for suppliers of goods or services with the potential to affect food safety of product.
    - The *Supplier specification letters* should be used to specify and communicate requirements to suppliers.
- Obtain and retain documentary evidence of compliance with these specifications.
    - Suppliers must complete and return the relevant *Supplier specification letter* as acknowledgement of these requirements.
    - A current copy of any third party certifications must be provided.
    - This evidence must be reviewed and updated annually.

10. Harvest

- Control the potential for contamination of harvested product by:
    - Ensuring bins, crates and tubs used are clean or a clean food grade liner is used.
    - Ensure 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.
        - Investigate 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 correctly adjusted (i.e. not cutting into soil).
    - Check pallets for contamination before use.
- Only company issued knives to be used.
- Control issue and return of knives.
- Clean and sanitise knives at the end of each day's use.
    - Minimise the number of "spare knives" taken into the paddock / field / garden.
- Ensure the relevant supervisor is notified of any lost knives as soon as possible.
- Contact relevant Fresh Salad Producers' Forum members as soon as possible if there is potential for unacceptable physical contamination (for example lost knife). This includes advising of potential for unacceptable contamination if it is unavoidable during harvest, for example mud on product or bins due to wet weather.

11. Postharvest handling

Correct postharvest handling is critical to maintaining the quality and food safety of salads. Buildings and structures must be designed, constructed and maintained to minimise the risk of contaminating product. The Fresh Salad Producers' Forum recognises the importance of establishing and maintaining the cold chain and expect to develop more specific time / temperature guidelines for salads in the near future.

- Water used for prewashing must comply with the postharvest water requirements and relevant Fresh Salad Producers' Forum members must be advised that prewashing has taken place.
- Ensure relevant Fresh Salad Producers' Forum member temperature requirements are met.
    - Refrigerate at 1 - 5^{o}C as soon as possible and maintain cool chain unless otherwise agreed in writing with Fresh Salad Producers' Forum members.
    - Cool room temperatures must be checked at least daily during operation.
    - A record of the actual cool room temperature must be kept.
    - Refrigeration equipment should be calibrated annually and have a tolerance of no more than +/- 1^{o}C.
- Antimicrobial chemicals are added to cooling water and monitored or topped up as necessary.
    - Records of treatment and monitoring must be kept.
    - Water used postharvest must meet the requirements detailed in section 3.4. Postharvest water.
- Postharvest handling areas / buildings must be 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 should be covered and maintained.
    - Windows and doors must be of solid construction. They must be in good condition to control dust, vermin and other contaminants.
    - Lights must either be covered or a plan is put in place for the disposal of product in the event of lights breaking.
    - Glass windows must be protected against breakage or a plan is put in place for the disposal of product in the event of lights breaking.
    - Adequate ventilation and extraction must be provided to prevent condensation and excessive dust.
    - Postharvest handling areas / buildings must be constructed in a manner and of materials that make them easy to clean.
    - 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.
    - Lighting must be sufficient to enable staff to work with clear visibility.

References and further reading

Title	Version	Published by / Author
Australian Guidelines for Water Recycling: Managing Health and Environmental Risks (Phase 1)	2006 www.ephc.gov.au	National Water Quality Management Strategy. Natural Resource Management Ministerial Council Environment Protection and Heritage Council Australian Health Ministers Conference
Commodity Specific Food Safety Guidelines for the Production and Harvest of Lettuce and Leafy Greens	16 October 2007	California Leafy Greens Marketing Agreement (LGMA)
Food Safety Begins on the Farm Grower Self Assessment of Food Safety Risks	2003	Department of Food Science, Department of Horticulture, Cornell University
Food Standards Code	Updated regularly www.foodstandards.gov.au	Food Standards Australia New Zealand
Guidance for Industry. Guide to Minimize Microbial Food Safety Hazards of Fresh-cut Fruits and Vegetables	26 October 1998	US Food and Drug Administration. Centers for Disease Control and Prevention
Guide to Minimize Microbial Food Safety Hazards of Fresh-cut Fruits and Vegetables.	February 2008	US Food and Drug Administration. Department of Health and Human Services, Center for Food Safety and Applied Nutrition
Guidelines for On-Farm Food Safety for Fresh Product	2nd edition	Australian Government Department of Agriculture, Fisheries and Forestry

Title	Version	Published by / Author
Microbiological hazards in fresh leafy vegetables and herbs. Meeting report. Advance pre-publication copy.	Meeting early May 2008	World Health Organisation. Food and Agriculture Organization of the United Nations.
Optimising Yield and Shelf Life of Iceberg and Cos Lettuce. A Training Guide for the Australian Lettuce Industry.	January 2007	Titley et al Horticulture Australia Limited
Sanitary Surveys and Remediation Guidelines for Water Resources (Appendix A of Commodity Specific Food Safety Guidelines for the Production and Harvest of Lettuce and Leafy Greens)	6 June 2007	California Leafy Greens Marketing Agreement (LGMA)

Appendix 1 Salad GAP guidelines for water sampling for microbial analysis

It is important not to contaminate samples as you collect them. This means you must wash and sanitise your hands before sample collection or wear sanitised gloves.

Sampling procedure

1. Contact the laboratory you are sending the sample to and request a sterile bottle for each water sample to be collected. Also request appropriate post / freight packaging.
2. Inform the laboratory of the tests you require to be carried out and when you will be forwarding the sample to them.
    - Once the bottles are received, do not open them until you are actually collecting the sample. Do not rinse out before taking the sample.
    - When removing cap, hold at the top making sure that fingers do not come into contact with the neck or the inner surface of the cap (hold the bottle near the base rather than near the neck).
    - Fill immediately with water to within 2.5 cm of the top and replace cap tightly, observing the same precautions as for opening. Do not lay down cap or allow it to touch anything.

<u>Tap sampling</u>

- Remove external fittings such as rubber tubes or hose attachments, unless you are specifically interested in the water quality as delivered through hoses.
- Turn tap on full and allow to run for 2 – 3 minutes to clear service lines.
- Fill bottle to within 2.5 cm from top from a gentle stream of water. Do not adjust flow rate during sampling. Avoid splashing.

<u>River, spring, lake, reservoir or well sampling</u>

- Do not sample too near the bank or too far from draw-off point.
- Hold bottle near base and plunge it, neck downwards, below water surface to a depth of about 30 cm.
- Turn bottle until neck points slightly upwards with the mouth directed towards the current. If there is no current, move bottle forward away from your hand. A rigid pole, 1.2 – 2.5 m long, with the bottle clamped firmly at one end is useful for collecting samples particularly when there is likely to be damage to the bank.
- When full, remove bottle from water and immediately replace cap.
- If unable to collect samples this way, a weight can be attached to the bottle which can then be lowered into the water.

<u>Hand pump sampling</u>

- Pump for about 5 minutes before collecting sample to remove all standing water in the pump.
- Collect sample directly from pump to bottle.
- Fill bottle to within 2.5 cm from top. Avoid splashing.

Preservation and storage of samples

- Ideally samples should reach the laboratory within 4 hours of collection. Samples must reach the laboratory within 24 hours of collection.
- If delay is inevitable, place samples in an insulated container surrounded by ice for transport, or at least keep in a cool place.

Sample size

- Samples should be sufficient for all tests required (not less than 400mls).

Sample checklist

- All samples should be labelled and accompanied with a completed water microbiology collection form.
- The laboratory will supply labelled sterilised bottles. Write sample details with a pencil, prior to immersing in water.
- The laboratory will also provide paperwork and contact details for you to send sample to. Generally these include:
  - your name / business name
  - source – locality and site
  - date and time of collection
  - tests required (for example E. coli)
  - address for accounts and results
- Other relevant information:
  - any form of treatment applied
  - prevailing weather conditions
  - water accessible to animals or humans

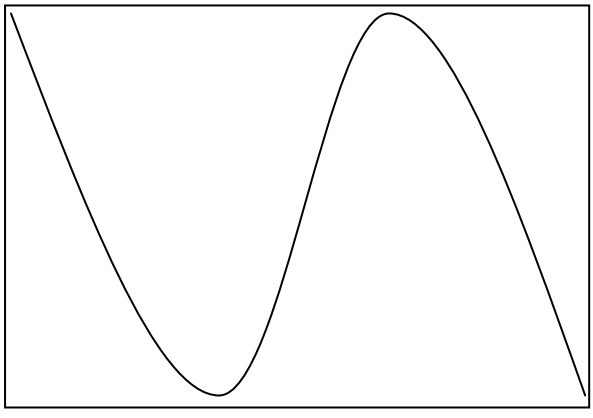
Appendix 2 Salad GAP guidelines for sampling soil for microbial analysis

It is most important to sample the soil carefully. Care must be taken to avoid contamination during sampling. To achieve this ensure the equipment used to gather the soil (for example an auger) is clean, and that the bags used to collect the soil are unused.

Sampling procedure

1. Contact the laboratory you are sending the sample to.
2. Inform the laboratory of the tests you require to be carried out and when you will be forwarding the sample to them.
    - Select an area in the paddock / field / garden which represents uniform soil conditions.
    - Avoid irrigation and wheel runs, headlands and compacted or other non-typical areas.
    - Within the area selected, follow a Z pattern (see Diagram 1) and collect 15 – 20 samples. Samples should be collected using an auger and be from a depth of up to 10 – 15 cm. Place each sample in a new, unopened resealable bag.
    - Record the depth on the sample information sheet (label) provided by the laboratory.
    - Once all the samples are taken, mix together. If you need to use a bucket to mix due to the volume of soil collected, make sure the bucket has been thoroughly cleaned before use.
    - Take ~500g of the mix and transfer it another new, unopened resealable bag. Take care not to handle the soil any more than is necessary.
    - Chill the sample immediately by placing it in an insulated container with a frozen ice pack or in a fridge. Do not freeze.
    - Forward the samples to the laboratory within 24 hours of sampling.
    - Complete a sample label giving the following details:
        - your name / business name
        - source – locality and site
        - date and time of collection
        - tests required (for example E. coli and Salmonella)
        - address for accounts and results
        - weather conditions (i.e. frost, recent rainfall)
        - recent pesticide / fertiliser application

Diagram 1



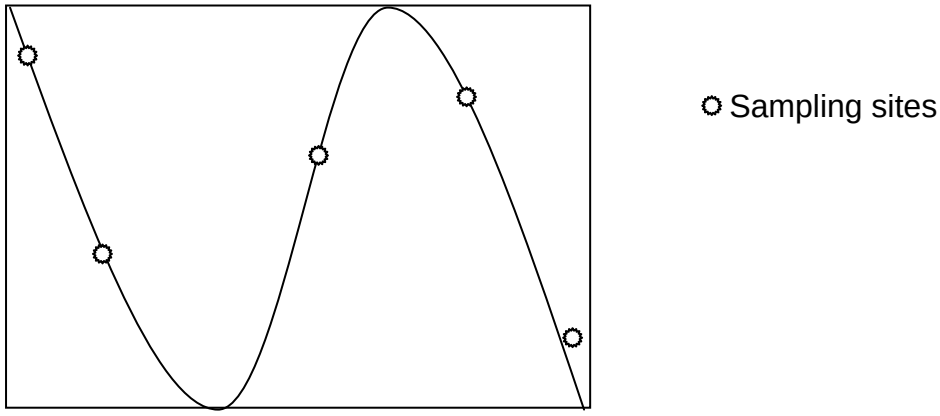
Appendix 3 Salad GAP guidelines for sampling produce for microbial analysis

It is important not to contaminate samples as you collect them. This means you must wear sanitised gloves, use a sanitised knife, and place the sample of produce in a sterilised bag or container.

Sampling procedure

1. Contact the laboratory you are sending the sample to, and request five sterile bags to be forwarded to you for samples.
2. Inform the laboratory the type of product you are testing, what tests you require done, and when you will be forwarding the sample to them.
3. Complete a sample label giving the following details:
    - your name / business name
    - name of product
    - source – locality and site
    - date and time of collection
    - tests required (for example E. coli and Salmonella)
    - address for accounts and results
- Collect one head / piece in the case of larger products (for example lettuce, capsicum) or five 100g samples of smaller products (for example spinach or baby leaf. Use a zigzag pattern across the site (see Diagram 1).
    - Do not include the dead leaves.
4. Care should be taken to ensure the samples are not contaminated with soil. This does not mean washing them to remove soil!
5. Once the samples are taken and the bags are labelled accordingly, place the samples in an insulated container with an ice block to keep the temperature 1 – 5°C.
6. Samples are to be received by the laboratory within 24 hours of the sample being taken.

Diagram 1



APPENDIX 4 – SALADGAP TRAINING GUIDE

salad GAP

Good Agricultural Practice

Training Guide

Produced for the Fresh Salad Producers' Forum, with the support of Horticulture Australia Limited

Author Jane Lovell, Tasmanian Quality Assured Inc.

This publication covers research conducted by HAL project OT06011: Salad Producers' Forum – Good Agricultural Practice Project

Published September 2008

This is part of the Salad GAP project and goes with Salad GAP guidelines.

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Disclaimer

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Introduction

- The health and hygiene of staff and visitors directly impacts the food safety of product as human pathogens and other contaminants can be transmitted by hand contact or by sneezing, coughing or spitting (or worse) on product.
- Staff and visitors can also inadvertently be responsible for physical contamination of product by taking various items out into the paddock / field / garden.
- Adequate facilities must be provided for staff, such as toilets and hand washing facilities, and there must be designated areas for eating and smoking.
- Staff and visitors can also introduce contaminants on their clothing or vehicles, so care is required in this regard as well.
- All staff, including casuals, must be trained in Salad GAP food safety and personal hygiene requirements.

Contents

Eating and smoking

- Smoking and eating may only take place in crop free areas.

Spitting

- Spitting is prohibited.

Toilets

- Toilet facilities to be used.

Handwashing

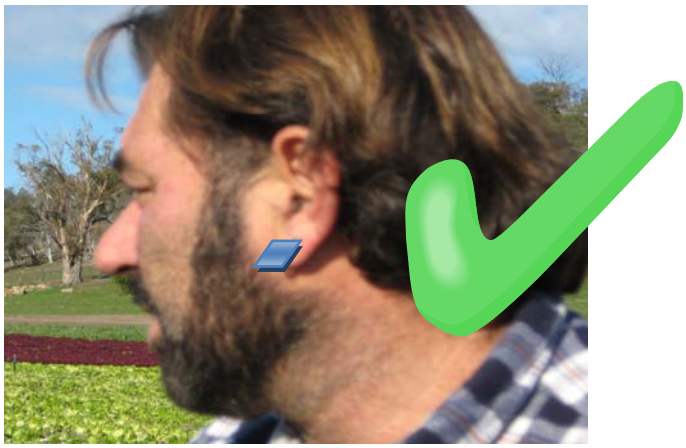
- Hands to be washed after using the toilet, smoking or eating.

Gloves

- Gloves must be removed before using the toilet, smoking or eating.
- If non disposable gloves are used in roles where there is direct product contact they must be washed and sanitised at least daily.
- These gloves must be dry before reuse.

Jewellery

- No visible jewellery is to be worn, with the exception of a plain wedding band and sleeper earrings.
- Any visible stud earrings or body piercings that cannot be removed must be taped or covered with a blue bandaid.
- Necklaces must be removed or completely covered by clothing.



Hair restraints

- All staff to wear caps, or hair to be tied back and contained.
- A baseball cap or similar is sufficient, hair nets are not required.
- Head wear must be subject to regular washing.

Clothing

- Clothing must not be ripped or torn, and must be visually clean at the beginning of the day / prior to commencing harvest or any product handling activity.
- Ideally, all outer clothing above waist height should not have external pockets.
- Footwear, including gumboots, should be cleaned as necessary to ensure product is not contaminated and that it does not pose a biosecurity, weed or disease threat.

Wounds

- All open wounds must be covered with a clean waterproof bandaid / dressing.
- All bandaids / dressings must be changed at least daily.
- Only blue bandaids are permitted in food handling roles.
- It is preferable that staff with wounds also wear non latex disposable gloves.

Illness

- Staff are required to report illness (such as symptoms of nausea, vomiting, diarrhoea) and will be given non-food contact jobs.
- Non food contact roles include:
- Tractor operation
- Fencing
- Equipment maintenance
- Office work

Physical contamination

Examples of physical contamination are:

- Weeds
- Insects
- Frogs / animals
- Glass
- Hair (human or animal)
- Cigarette butts
- Knives
- Keys
- Plastic of all types
- Blades
- Tree seeds
- Rubber
- Nuts, bolts and oil
- Fencing wire
- Foreign bodies in soil
- Nails

- Rubbish must not be left in the paddock / field / garden.
- With the exception of supervisors, and emergency situations, pens, pencils, mobile phones and other similar items must not be taken into the paddock / field / garden.
- Personal items must be kept in a staff room or other designated area unless specifically approved by a supervisor.
- No personal items (other than plastic bottles containing water) to be taken into paddock / field / garden.


0cm1 2 3

Weeds

- Supervisors and key harvest staff must be aware of the food safety risk of certain weeds and have the ability to identify them:
  - Stinging nettles – can cause anaphylactic response.
  - Deadly nightshade
  - Thorns

Deadly Nightshade (Solanum nigrum)
Artist: Kathleen O'Ryan
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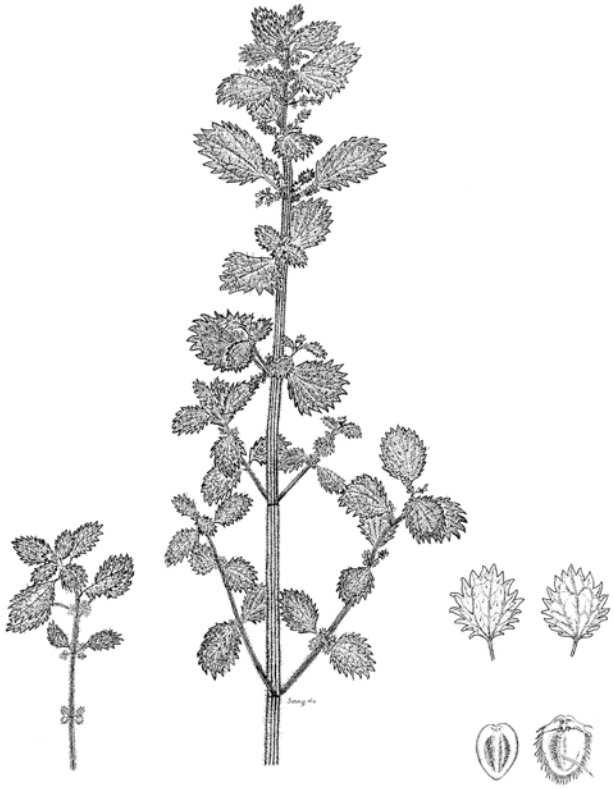

Stinging Nettle (Urtica incise)
Artist: Sang Ho
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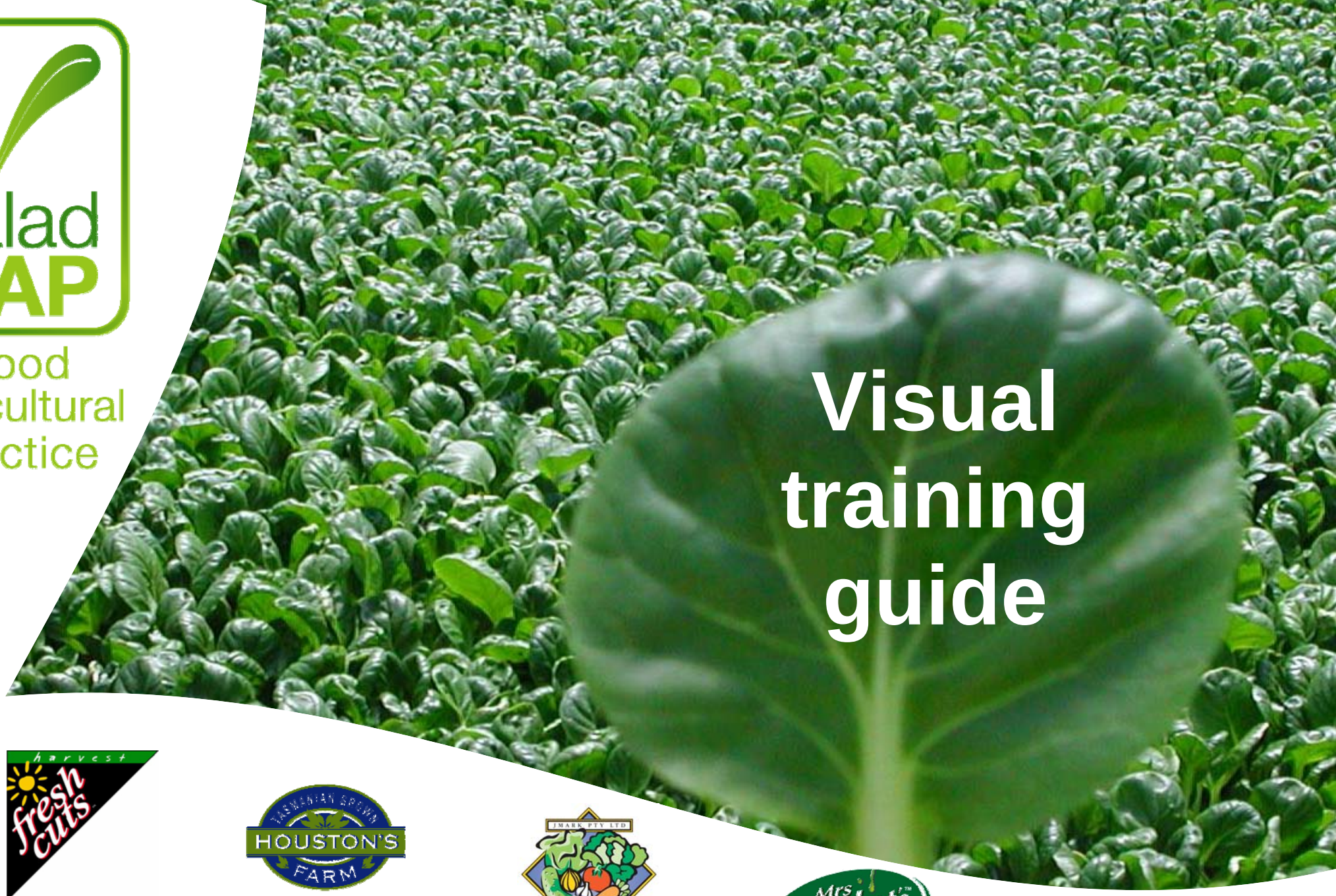
APPENDIX 5 – SALADGAP VISUAL TRAINING GUIDE

salad GAP

Good Agricultural Practice



Visual training guide

harvest fresh cuts

HOUSTON'S FARM

JMARK PTY LTD Gourmet Selections

Mrs Crockets Fast & Fresh

Salad Fresh

Produced for the Fresh Salad Producers' Forum, with the support of Horticulture Australia Limited

Author Jane Lovell, Tasmanian Quality Assured Inc.

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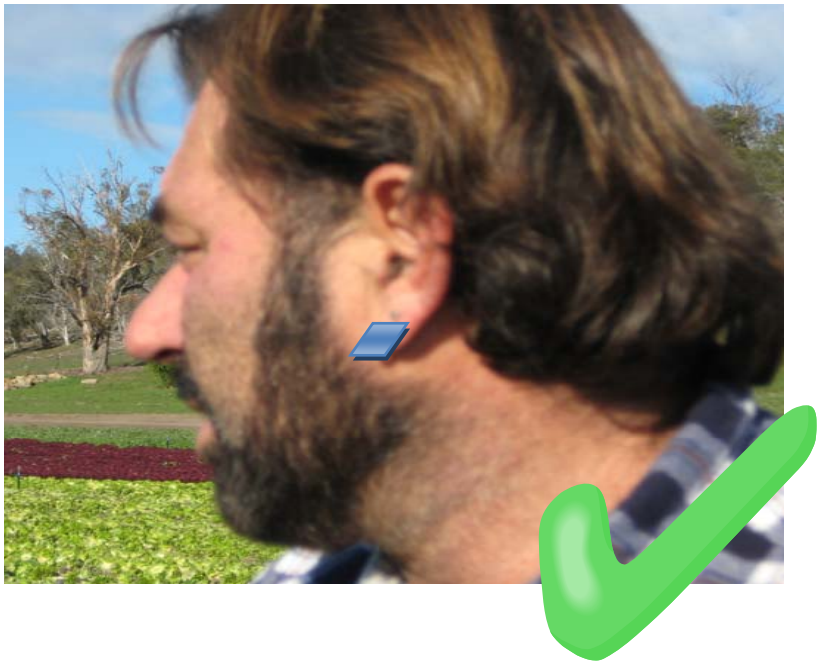


CLARK


SMOKING CAUSES EMPHYSEMA
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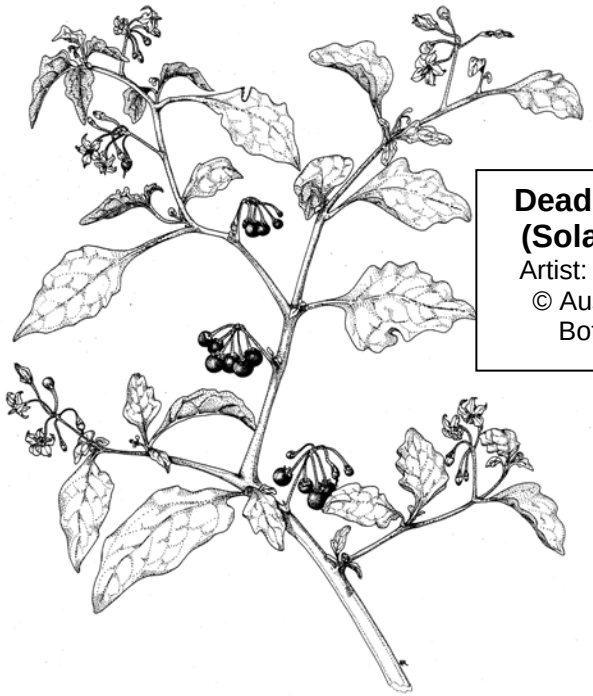
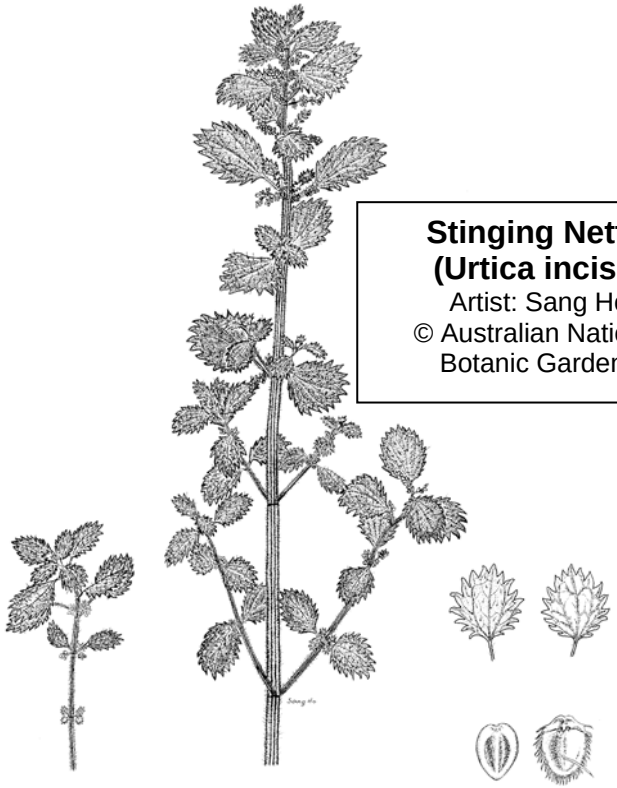


Deadly Nightshade
(Solanum nigrum)
Artist: Kathleen O'Ryan



Stinging Nettle
(Urtica incise)
Artist: Sang Ho

APPENDIX 6 – DOCUMENT TEMPLATES FOR SALADGAP REQUIREMENTS

SaladGAP audit checklist

Date: _____ Business name: _____

Current Forum members supplied: _____

Number	Element	Criteria / Evidence	Level	Compliant Y / N / NA	Actions required and time frame
1.0 New sites					
1.0	Is the business producing salad from any new sites?	• A new site is land that has not previously grown salad vegetables or is being brought back into salad production after a significant break from cropping. Cropping includes growing cereals or grain crops but does not include pasture. • *If no new sites do not proceed with this section.*	-		
1.0	Have any government planning approvals or restrictions been identified that would prevent proceeding with new site?	• Local, state or federal government planning approvals or restrictions have been checked	-		
1.0	Has the *Decision Guide Record - Site assessment* been completed?	• The *Decision Guide – Site assessment* must be worked through for each new site before planting salads. • A completed copy of the *Decision Guide Record – Site assessment* must be available.	Critical		
1.0	Have all actions required by the Decision Guide been recorded and completed?	• Copies of any certificates / certificates of analysis required by the Decision Guide must be available. • Evidence of actions taken as a result of completing the Decision Guide Record must be available. • Record of any discussions with Fresh Salad Producers' Forum members (date, who and outcome) must be available.	Major		
2.0 Fertilisers					
2.1 Non-synthetic fertiliser					
2.1	Is there any evidence of use of raw manures or biosolids on land used for salad production?	• Check for any evidence of raw manures or biosolids use on farm. • If used on farm, check records of application and crop rotation. • If salads planted on land treated with raw manure, the requirements of the *Decision Guide – Site assessment* with regard to land used for livestock production need to be adhered to. • Salad must not be planted after application of biosolids.	Critical		

Number	Element	Criteria / Evidence	Level	Compliant Y / N / NA	Actions required and time frame
2.1	Has the *Decision Guide Record Non-synthetic fertilisers* been completed?	• The *Decision Guide – Non-synthetic fertiliser* must be worked through for each non-synthetic fertiliser before use. • A copy of the *Decision Guide Record – Non-synthetic fertiliser* must be available for each non-synthetic fertiliser used	Critical		
2.1	Have all actions required by the Decision Guide been recorded and completed?	• Copies of any certificates / certificates of analysis required by the Decision Guide must be available. • Evidence of actions taken as a result of completing the Decision Guide Record must be available. • Record of any discussions with Fresh Salad Producers' Forum members (date, who and outcome) must be available.	Major		
2.1	Has the *Decision Guide Record Non-synthetic fertilisers indirect contact* been completed?	• The *Decision Guide – Non-synthetic fertiliser indirect contact* must be worked through. • A copy of the *Decision Guide Record – Non-synthetic fertiliser indirect contact* must be available.	Critical		
2.1	Have all actions required by the Decision Guide been recorded and completed?	• Copies of any certificates / certificates of analysis required by the Decision Guide must be available. • Evidence of actions taken as a result of completing the Decision Guide Record must be available. • Record of any discussions with Fresh Salad Producers' Forum members (date, who and outcome) must be available.	Major		
2.1	Have accurate records been retained for all non-synthetic fertiliser applications?	• Records must include: o date of application o time of application o product(s) used o batch number(s) o location / block / bed o wind speed and direction o post application incorporation details (what was done and when)	Major		

Number	Element	Criteria / Evidence	Level	Compliant Y / N / NA	Actions required and time frame
2.1	Does storage of non-synthetic fertilisers on site comply with Salad GAP requirements?	• Any non-synthetic fertiliser stored on site must not pose a contamination risk for salad. • Storage areas must be: o physically isolated o positioned with consideration of prevailing wind direction, potential for run off following rain, ways of preventing run off from entering waterways or growing areas / contacting salad crops and ways of preventing leaching into ground water supplies	Major		
2.1	Is there a risk of contamination from equipment used to apply non-synthetic fertilisers?	• If not using equipment dedicated for application of non-synthetic fertilisers, equipment must be cleaned and sanitised after use. • Details of cleaning method must be documented and records must be available.	Major		
2.3 All Fertiliser					
2.3	Have fertilisers (synthetic and non-synthetic) been spread accurately?	• No evidence of off target application of synthetic or non-synthetic fertilisers. • Operator aware of actions needed to ensure accurate placement of fertiliser. • Records of application of non-synthetic fertiliser support appropriate application (particularly wind direction).	Minor		
2.3	Have fertilisers (synthetic and non-synthetic) been incorporated / irrigated as soon as possible after application?	• Records of application of non-synthetic fertiliser detail incorporation method and timing relative to time of application. • Records not required for synthetic fertilisers.	Minor		
2.3	If fertiliser is present at time of harvest, has action been taken to minimise / eliminate risk of product contamination?	• Records of advising relevant Fresh Salad Producers' Forum members and course of action agreed on are available. • Pre harvest checklist prompts for check of crop for presence of fertiliser.	Major		
3.0 Water					
3.1 Pre harvest water					
3.1	Has the *Decision Guide Record - Pre harvest water* been completed?	• The *Decision Guide – Pre harvest water* must be worked through before use, for each water source. • A copy of the *Decision Guide Record – Pre harvest water* must be available. • Records must be available to trace water used to particular salad crops.	Critical		

Number	Element	Criteria / Evidence	Level	Compliant Y / N / NA	Actions required and time frame
3.1	Have all actions required by the Decision Guide been recorded and completed?	• Copies of any certificates / certificates of analysis required by the Decision Guide must be available. • Evidence of actions taken as a result of completing the Decision Guide Record must be available. • Record of any discussions with Fresh Salad Producers' Forum members (date, who and outcome) must be available.	Major		
3.1	Has pre harvest water quality been regularly monitored?	• Records must be available to confirm that new water sources were tested before use, and that: o testing continued on a monthly basis for 12 months o testing continued annually at the time of greatest risk	Critical		
		• Records must be available to confirm that existing water sources were tested quarterly until results are available for at least a 12 month period, and that: o testing continued annually at the time of greatest risk	Major		
		• Records must be available to confirm that in the event of an extreme event or likely case of contamination to the water supply, additional water testing was undertaken.	Major		
3.1	Has water sampling been completed as per Salad GAP guidelines or advice from laboratory?	• Operator aware of correct sampling procedure. • Water sample must be collected from as close as possible to the "point of use".	Major		

Number	Element	Criteria / Evidence	Level	Compliant Y / N / NA	Actions required and time frame
3.1	Have water sources been protected from potential contaminants?	• Water sources must be, as far as is practicable, protected from potential contaminants. Impacts to be considered include, but are not limited to: o run-off from paddocks with livestock o run-off from roadways o upstream livestock operations o location of chemical storage, mixing and machinery washing areas o floods, storms and other extreme events • Where the business has control over livestock movements, livestock must be prevented from having direct access to water sources used for salad production. • Reasonable steps have been taken to secure water sources from human interference. • Control measures exist to prevent unintended movement of water between interconnected water sources.	Major		
3.1	Has a farm map been marked with locations of relevant water sources, drainage lines, water run-off, septic tanks etc?	• The farm map must include location of: o surface water (dams, irrigation channels, weirs, streams / rivers) o ground water and extraction points (bores) o town / reclaimed water supplies o drainage lines and other significant water run-off areas and discharge points (i.e. where water enters the property, water movement within the property, and where water leaves the property) o septic tanks and septic tank outlets	Minor		

Number	Element	Criteria / Evidence	Level	Compliant Y / N / NA	Actions required and time frame
3.2 Bores					
3.2	Does the location and maintenance (including cleaning) of bores comply with Salad GAP requirements?	• There is evidence that bores are maintained in good condition. • Bores must not be located close to sources of contamination (no closer than 33m from watertight septic tank or subsurface sewage leaching field or animal enclosure, 20m from any sewer, 50m from cesspool or seepage pit). • Bores must be positioned upslope from other potential contaminants (fertiliser, pesticide and fuel storage and handling areas). • Water is diverted away from bore. • Records of disinfection of bores are available if E.coli levels exceed limits specified for pre harvest water sources.	Major		
3.3 Recycled or reclaimed water					
3.3	Does the use of reclaimed / recycled water comply with Salad GAP requirements?	• Documentation must be available to confirm recycled water meets the specifications for water for use on commercial food crops consumed raw or unprocessed. • Records must be available to confirm that this water is tested monthly during period of use.	Critical		
3.3	Has detection of E.coli been reported to the relevant persons?	• Records must be available to demonstrate reporting of any detection of E.coli to the water supplier and relevant members of the Fresh Salad Producers' Forum and that product was not supplied to members of the Forum until their acceptance, in writing, was received.	Major		
3.4 Post harvest water					
3.4	Is all water that contacts product post harvest potable?	• Records must be available to show that water contacting product post harvest is potable (<1 E.coli/100mls).	Critical		
3.4	Has a sampling schedule for post harvest water been developed and is it followed?	• A sampling schedule must be available and records must confirm it is being followed. • The *Salad GAP guidelines for water sampling for microbial analysis* can be used to document the schedule.	Major		
3.4	Has water sampling been completed as per Salad GAP guidelines or advice from laboratory?	• Operator aware of correct sampling procedure. • Water sample must be collected from as close as possible to the "point of use".	Major		

Number	Element	Criteria / Evidence	Level	Compliant Y / N / NA	Actions required and time frame
3.4	Is evidence available of appropriate testing of post harvest water as per Salad GAP requirements?	• Records must be available to confirm that this water is tested monthly during period of use.	Major		
3.4	Has detection of E.coli in post harvest water been reported to the relevant persons?	• Records must be available to demonstrate reporting of any detection of E.coli to the water supplier and relevant members of the Fresh Salad Producers' Forum and that product was not supplied to members of the Forum until their acceptance, in writing, was received.	Major		
3.4	If water is treated, is the treatment method appropriate?	• The method of treating post harvest water must be able to be substantiated with an appropriate reference. • The method detailed in Salad GAP is one appropriate method of treating water.	Major		
3.4	If water is treated, are monitoring records available and do they demonstrate compliance with the treatment method?	• Records of monitoring post harvest water treatment must be available and must confirm the treatment method is under control.	Major		
3.4	If any post harvest treatments are applied, do they comply with regulatory requirements?	• Evidence must be available to prove compliance with any regulatory requirements.	Major		
4.0 Chemicals					
4.1 Agricultural Chemicals					
4.1	Have agricultural chemicals been purchased from suitable suppliers?	• Evidence of chemicals being purchased from an AgSafe accredited suppliers. For example, AgSafe logo on invoice, or *Supplier specification letter* returned from chemical suppliers.	Minor		
4.1	Are staff handling and using agricultural chemicals appropriately trained?	• Evidence is available of at least one staff member having successfully completed a Chemical Use and Handling course (such as ChemCert or SmartTrain). • Evidence is available that all other staff handling and using chemicals having been appropriately trained: o Either internally trained by the above person, or o Having successfully completed a Chemical Use and Handling course (N.B. in some states the latter is mandatory for all people handling and using agricultural chemicals)	Major		

Number	Element	Criteria / Evidence	Level	Compliant Y / N / NA	Actions required and time frame
4.1	Are relevant records relating to chemical application available?	• Current copies of labels or permits must be available (note that in Victoria off-label use is allowed under certain circumstances). • Copies of Material Safety Data Sheets (MSDS) must be available for all agricultural chemicals used or stored on site.	Major		
4.1	Have chemical applications met all legal requirements?	• Records must be available to demonstrate chemical application has taken place in accordance with the chemical label, or permit, or particular state requirements.	Critical		
4.1	Have chemicals been applied in a manner which reduces chance of spray drift?	• Operators must be aware of conditions under which spray drift is likely and know not to apply chemicals under these conditions. • Wind speed and direction records are not a mandatory requirement of Salad GAP but may be required to comply with legislation in some states.	Minor		
4.1	Have precautions been taken to minimise the risk of contaminating product with agricultural chemicals and / or exceeding MRLs?	• Documentation must be available to support adherence to withholding periods. For example, spray diary and dates of harvest and *Pre harvest checklist*.	Critical		
		• Chemical storage, mixing and disposal facilities must be located to minimise risk of contamination of product from runoff or direct contact.	Major		
		• Agricultural chemical store must be: o structurally sound o secure (to restrict access to unauthorised personnel)	Major		
		• Agricultural chemicals must be stored according to their label directions, in their original containers (or a suitable alternative in the case of breakage) and with legible labels attached.	Minor		
		• A spill kit must be available in the chemical store.	Minor		
		• Excess spray mix and rinsate from spray equipment must be disposed of in a manner which does not pose a risk to product from either run off or direct contact.	Major		

Number	Element	Criteria / Evidence	Level	Compliant Y / N / NA	Actions required and time frame
4.1 (cont'd)		• Empty agricultural chemical containers must be stored in a manner which does not pose a risk to product from either run off or direct contact. • Empty agricultural chemicals must be disposed of through appropriate collection agencies, such as DrumMuster.	Minor		
		• Unusable agricultural chemicals must be identified and securely stored to prevent inadvertent use. For example in a designated area in the chemical store. • These chemicals must be disposed of through appropriate collection agencies, such as ChemClear.	Minor		
4.1	Are product residue tests completed at least annually, and checked for compliance with Maximum Residue Limits (MRLs)?	• Records of at least annual residue tests must be available and demonstrate compliance with the relevant MRLs. • Advise all relevant customers if MRLs are exceeded.	Critical		
4.1	Are customers made aware of any breaches of MRL?	• Documents must be available to demonstrate relevant Forum members have been made aware of any breaches of MRL.	Major		
4.2 Heavy metals					
4.2	Have the cadmium and lead sections of the *Decision Guide Record - Site assessment* been completed for all sites where leafy green vegetables and root crops are being grown?	• The cadmium and lead sections of the *Decision Guide – Site assessment* must be worked through for each site where leafy green vegetables and root crops are being grown or are planned to be grown. • A completed copy of the cadmium and lead sections of the *Decision Guide Record – Site assessment* must be available for these sites.	Critical		
4.2	Have all actions required by the Decision Guide been recorded and completed?	• Copies of any certificates / certificates of analysis required by the Decision Guide must be available. • Evidence of actions taken as a result of completing the Decision Guide Record must be available. • Record of any discussions with Fresh Salad Producers' Forum members (date, who and outcome) must be available.	Major		

Number	Element	Criteria / Evidence	Level	Compliant Y / N / NA	Actions required and time frame
4.3 Persistent chemicals					
4.3	Has the persistent chemicals section of the *Decision Guide Record - Site assessment* been completed for all salad production areas?	• The persistent chemicals section of the *Decision Guide – Site assessment* must be worked through for all sites where salad is produced. • A completed copy of persistent chemicals section of the *Decision Guide Record – Site assessment* must be available for these sites.	Critical		
4.3	Have all actions required by the Decision Guide been recorded and completed?	• Copies of any certificates / certificates of analysis required by the Decision Guide must be available. • Evidence of actions taken as a result of completing the Decision Guide Record must be available. • Record of any discussions with Fresh Salad Producers' Forum members (date, who and outcome) must be available.	Major		
4.4 Other chemicals					
4.4	Have all slug and mouse pellets / baits been applied appropriately?	• Slug and mouse pellets / baits in accordance with the label. • There must not be any visual evidence of contamination of crop (for example pellets lodged in lettuce heads) or of packaging / harvest equipment.	Major		
5.0 People					
5.1 Staff					
5.1	Are key personnel appropriately trained with regard to the particular requirements of Salad GAP?	• Key personnel (those managing / supervising production activities) must understand product specifications and the requirements of Salad GAP. • Training records must be available.	Critical		
5.1	Are training materials available in relevant languages or pictorially?	• Copies of the *Training Guide, Visual Training Guide, Training Notes* or similar must be available and used for training.	Major		
5.1	Are staff appropriately trained with regard to food safety and personal hygiene?	• Records of training of staff must be available and must include food safety and personal hygiene training.	Major		
5.1	Are staff working to the Salad GAP food safety and personal hygiene requirements?	• Staff involved with production and harvesting activities must be adhering to Salad GAP food safety and personal hygiene requirements.	Major		
5.1	Has a return to work policy been developed?	• A policy must be available addressing requirements for staff on their return to work following illness. • Staff must be aware of this policy.	Minor		

Number	Element	Criteria / Evidence	Level	Compliant Y / N / NA	Actions required and time frame
5.1	Are toilet facilities available and are they appropriately equipped and clean?	• Toilet facilities must be available, including portable toilets where appropriate.	Major		
		• If portable toilets are used, they must be placed in locations that minimise risk to product and maximises accessibility.	Major		
		• If portable toilets are used, the means of emptying waste must not present a risk to product.	Major		
		• Toilet facilities must be equipped with: o running water o liquid soap contained within a dispenser (not bars/cakes of soap) o disposable paper towel or blow air drier o hand sanitiser o a means of containing used paper towels	Major		
		• Method of cleaning all toilet facilities, including portable toilets, must be documented. • Records of cleaning must be available.	Minor		
		• All toilets must be in hygienic condition.	Major		
5.2 Visitors					
5.2	Are farm biosecurity measures in place?	• Access to production areas must, where possible, be restricted. o Appointments to be made prior to entering property.	Minor		
		• Agronomists, company representatives and field officers are requested to ensure vehicles, clothing and boots are practically clean or access may be restricted. o Observations during audit and returned *Supplier specification letters* are considered sufficient evidence of compliance.	Minor		
		• All visitors must abide by same requirements as staff if handling product or entering field or packing production areas. o Observations during audit, returned *Supplier specification letters* or verbal instruction from company representative are considered sufficient evidence of compliance.	Minor		

Number	Element	Criteria / Evidence	Level	Compliant Y / N / NA	Actions required and time frame
6.0 Paddock Hygiene					
6.1 General					
6.1	Has the *Salad GAP Pre harvest checklist* or equivalent been completed?	• The *Salad GAP Pre harvest checklist* or equivalent must be completed each day before commencing harvest.	Major		
6.2 Animals					
6.2	Have access to production sites been restricted to animals / birds?	• Production sites must be maintained in a manner which restricts access of: o domestic animals (including the boss's dog) o livestock o wild animals and birds	Major		
		• Specific control measures can include: o maintaining fences and other physical barriers to prevent intrusion o maintaining an area of cleared land between bush and production areas o avoiding attracting birds -bird scarers / strobe lights may be installed o maintaining minimum distances to livestock (10m). If livestock are uphill from production areas and there is potential for water run-off through or from grazing paddocks, increase the distance and / or install diversions such as ditches, drains and grassed areas to minimise run off reaching crop • Where the business has control over livestock movements, livestock must be prevented from having direct access to water sources used for salad production	Major		
6.2	Has action been taken in the event that animals / birds have entered production sites?	• Key personnel (those managing / supervising production activities) must be aware of action to be taken if there is evidence of significant animal or bird activity in production areas. Actions should include: o not harvesting any product that has come in direct contact with faecal material o not harvesting any product that has come in direct contact with dead bird / animal material o removing dead birds / animals from field in a way that does not pose contamination to product • Records of action should be recorded.	Major		

Number	Element	Criteria / Evidence	Level	Compliant Y / N / NA	Actions required and time frame
6.3 Weeds					

6.3	Have appropriate weed control strategies been put in place?	• Evidence of weed control strategies being implemented during the growth of the crop must be available, for example spray diary
		• Supervisors and staff must be aware of weeds of concern in leafy green vegetable crops:
		  o Stinging nettles
		  o Thorns
		  o Deadly nightshade
		• Crops, and particularly leafy green vegetable crops, must be inspected for weeds prior to harvest.
		• Strategies must be put in place to minimise the risk of harvesting weeds with product.
		• Records must be maintained.
			Major		

6.4 Insects					
6.4	Have appropriate insect control strategies been put in place?	• Evidence of insect control strategies being implemented during the growth of the crop must be available, for example spray diary. • Crops, and particularly leafy green vegetable crops, must be inspected for high insect populations prior to harvest. • Strategies must be put in place to minimise the risk of harvesting insects with product. • Records must be maintained.	Major		
6.5 Frogs					
6.5	Have appropriate frog control strategies been put in place?	• Consideration must be given to the need for implementing frog control strategies. This should include history of frog activity and of harvesting frogs with product. • Crops, particularly leafy green vegetable crops, must be inspected for frogs prior to harvest and a record maintained. • Strategies must be put in place to minimise the risk of harvesting insects with product.	Minor		

Number	Element	Criteria / Evidence	Level	Compliant Y / N / NA	Actions required and time frame
6.6 Floods					
6.6	Is there evidence of control strategies being put in place to protect food safety following flooding?	• Key personnel (those managing / supervising production activities) are aware of control measures needed in the event of flooding. • The *Decision Guide – Pre harvest water* must be worked through before using any water affected by flood. • A copy of the *Decision Guide Record – Pre harvest water* must be available for these occasions. • Records must be available to identify the location and extent of flooding.	Critical		
6.6	Have all actions required by the Decision Guide been recorded and completed?	• Copies of any certificates / certificates of analysis required by the Decision Guide must be available. • Evidence of actions taken as a result of completing the Decision Guide Record must be available. • Record of any discussions with Fresh Salad Producers' Forum members (date, who and outcome) must be available.	Major		
7.0 Cleaning					
7.0	Has a cleaning schedule been developed and implemented?	• A cleaning schedule, detailing: o item to be cleaned o method of cleaning o frequency of cleaning o rates of chemicals used o responsibility for cleaning • The Cleaning schedule must be in place for items that contact salad, including: o Knives o Blades o Belts and food contact surfaces o Bins/crates/tubs. • The cleaning schedule must also include toilets, portable toilets, staff lunch rooms and post harvest handling and storage equipment / facilities, particularly cooling and storage facilities and equipment and transport vehicles.	Minor		
7.0	Are relevant records relating to cleaning chemicals available?	• There must be evidence of cleaning chemicals being food grade. • Copies of Material Safety Data Sheets (MSDS) must be available for all cleaning chemicals used or stored on site.	Minor		

Number	Element	Criteria / Evidence	Level	Compliant Y / N / NA	Actions required and time frame
7.0	If cleaning of equipment is the responsibility of the supplier, is this documentation covering their responsibilities and how cleaning is completed?	• There must be documentation clearly defining the responsibility of who is to clean the equipment, and how the equipment is to be cleaned. As a minimum a copy of the *Supplier specification letter* must be completed by the supplier and a copy available on site. • Any item that is visibly unclean should not be used until it is cleaned or product is protected from potential contamination (for example a clean bin liner used).	Major		
7.0	Have records of cleaning been maintained?	• Records of cleaning must be available and must include details of: o item cleaned o method of cleaning o date cleaned o rate of chemicals used o name of person completing cleaning	Minor		
7.0	Is all equipment used to handle, transport or store product visibly clean?	• All equipment used to handle, transport or store product must be visibly clean.	Major		
8.0 Equipment					
8.0	Is all equipment used to handle, transport or store product made of non-toxic materials and able to be easily cleaned?	• Visual inspection of equipment used to handle, transport and store product must conclude this equipment is appropriate for use.	Major		
8.0	Has all equipment used in the production and harvest of salad been appropriately maintained?	• Irrigation equipment must be stored in a manner that minimises the chances of contamination. o In particular, infestation by insects or vermin should be minimised.	Minor		
		• Key personnel (those managing / supervising production activities) should be aware of the need to, where possible, ensure irrigation lines should be free from water at the end of the season / prior to storage.	Minor		
		• Key personnel (those managing / supervising production activities) must be aware of the need to commission irrigation equipment at the beginning of the season or after periods of non use (> 4 weeks).	Minor		
		• Key personnel (those managing / supervising production activities) must be aware of the need to flush out equipment such as transportable water tanks or fertigation equipment for irrigation prior to use.	Minor		

Number	Element	Criteria / Evidence	Level	Compliant Y / N / NA	Actions required and time frame
8.0 (cont'd)		• Visual inspection of field harvest, post harvest handling, storage and cooling equipment must indicate this equipment is appropriately maintained. Particularly: o blades and belts must not be damaged or broken o hoses on equipment must not be leaking o headlights, glass and hard plastic must not be broken o bins/crates/tubs must not be damaged o bins/crates/tubs must be stored to minimise contamination (dirt, dust, vermin) o wherever possible, for field equipment engines, hoses etc should be placed over wheel runs	Major		
8.0	Are appropriate actions taken in the event of potential contamination of product during harvest?	• If equipment has been found to be damaged or parts missing that could have contaminated product, relevant Fresh Salad Producers' Forum members must be advised. A formal record of this advice is not required.	Major		
8.0	Is harvesting equipment only used for that purpose?	• Bins/crates/tubs must not be used for any other purpose harvesting and storing salad. • Knives used for harvest must be issued and controlled by the business (from section 10) • Items that have been decommissioned must be readily identifiable.	Major		
9.0 Suppliers					
9.0	Is evidence available that suppliers of goods and services that may affect food safety are aware of their responsibilities?	• Evidence must be available of suppliers of goods or services being made aware of their responsibilities and the particular requirements of the business. o The *Supplier specification letters* can be used for this purpose. o Copies of third party certifications should also be obtained.	Major		

Number	Element	Criteria / Evidence	Level	Compliant Y / N / NA	Actions required and time frame
10.0 Harvest					
10.0	Has the potential for contamination of harvested product been controlled?	• Visual inspection of harvest operations must indicate control of the potential for contamination. Particularly: o bins/crates/tubs are clean or a clean food grade liner is used o broken or cracked bins/crates/tubs are not used o contact between the ground and bottom of pallets, is minimised or eliminated o bins/crates/tubs must not be dragged along the ground o machine harvester is correctly adjusted (i.e. not cutting into soil) o check pallets for contamination before use o containers used repeatedly during harvest must be cleaned at once a day	Major		
10.0	Have knives been appropriately cleaned and controlled?	• Only company issued knives to be used. • Records must be available to support the control of issue and return of knives. • Knives must be cleaned and sanitised at the end of each days use. • Records of cleaning must be available. o The *Pre harvest checklist* is an acceptable record. • Only minimal numbers of spare knives should be taken into the field. • Staff must be aware of the need to inform the relevant supervisor in the event of a knife being lost.	Major		
		• Control the potential for contamination of harvested product by: o ensuring harvest containers used repeatedly during harvest are cleaned at least daily o contacting relevant Fresh Salad Producers' Forum members as soon as possible if there is potential for unacceptable physical contamination (for example lost knife) This includes advising of potential for unacceptable contamination if it is unavoidable during harvest, for example mud on product or bins due to wet weather	Major		

Number	Element	Criteria / Evidence	Level	Compliant Y / N / NA	Actions required and time frame
10.0	Are customers made aware of any potential physical contamination of harvested product?	• Key personnel (those managing / supervising production activities) must be aware of the need to inform relevant Forum members if there is potential of physical contamination of harvest product. • No record of this communication is required.	Major		
11.0 Post harvest handling					
11.0	Does water used for prewashing comply with post water requirements?	• Water used for prewashing must comply with the post harvest water requirements. Appropriate records must be available.	Critical		
11.0	Are customers made aware if prewashing takes place?	• Key personnel (those managing / supervising production activities) must be aware of the need to inform relevant Forum members if product has been prewashed. • No record of this communication is required.	Major		
11.0	Is water quality maintained?	• Records of treating and monitoring cooling water with antimicrobial chemicals must be available.	Minor		
11.0	Have appropriate temperature controls been met?	• Copies of Forum members' temperature requirements must be available. • Records must be available to show compliance with these requirements. • If coolrooms are used, daily temperature checks should be undertaken. o Temperature settings for coolrooms must be 1 - 5^{o}C. o Refrigeration equipment should be calibrated annually and have a tolerance of no more than +/- 1^{o}C. o Records of calibration / checking accuracy of coolroom thermometers should be available.	Minor		

Number	Element	Criteria / Evidence	Level	Compliant Y / N / NA	Actions required and time frame
11.0	Are post harvest handling areas / buildings constructed and maintained to minimise risk of contaminating product?	• Visual inspection of post harvest handling areas / buildings must indicate control of the potential for contamination. Particularly: o Free of objectionable odours, dirt, dust or other contaminants o Walls and ceilings must be virtually free of dirt, debris, condensation and mould growth o Floors must be solid and in good repair o Drains should be covered and maintained o Windows and doors must be of solid construction. They must be in good condition to control dust, vermin and other contaminants o Lights must either be covered or a plan is put in place for the disposal of product in the event of lights breaking o Glass windows must be protected against breakage or a plan is put in place for the disposal of product in the event of lights breaking o Adequate ventilation and extraction must be provided to prevent condensation and excessive dust	Major		
11.0	Are post harvest handling areas / buildings constructed in a manner and of materials that make them easy to clean?	• Visual inspection of post harvest handling areas / buildings must indicate the ability to clean them. Particularly: o Constructed in a manner and of materials that make them easy to clean o Use of wood and wooden products must be minimised	Major		
11.0	Is lighting sufficient to permit staff to work easily?	• Visual inspection of post harvest handling areas / buildings must indicate lighting is sufficient to enable staff to work with clear visibility	Minor		

Cleaning Record

Date: _____

Item / Area	Cleaned as per method in *Cleaning Schedule*	Chemical and rate used as per *Cleaning Schedule*	Initials of Cleaner
Knives			
Blades			
Belts			
Bins, crates, tubs			
Toilet			
Lunch Room			
Cooling Facility			
Storage Facility			
Transport Vehicle			

Cleaning Schedule

Item / area to be cleaned	Method of cleaning	Frequency of cleaning	Name of chemical and rate	Responsibility

Decision Guide Record – Non-synthetic fertilisers indirect contact

To be completed when working through Decision Guide – Non-synthetic fertilisers indirect contact

Site identification: _____ Date: _____ Completed by: _____

Risks identified	Steps taken to address	Outcome / notes	Further action needed	Outcome / notes
☐ Non-synthetic fertilisers applied on own farm to non-salad crops.	☐ An adequate buffer zone in place to prevent contamination of adjacent crops. ☐ Do not spread fertiliser if more than a light breeze is blowing towards areas where salad will be grown. ☐ Incorporate material into soil or water it in as soon as possible after application.			
☐ Non-synthetic fertilisers applied by neighbours.	☐ Discuss with your neighbour and request: ☐ An adequate buffer zone in place to prevent contamination of your adjacent crops. ☐ Not to spread fertiliser if more than a light breeze is blowing towards areas your property. ☐ Material to be incorporated or watered in as soon as possible after application.			

Risks identified	Steps taken to address	Outcome / notes	Further action needed	Outcome / notes
☐ Non-synthetic fertiliser applied within 12 months of land being planted with salad crops.	☐ Do not harvest until discussed with all relevant Salad Producers' Forum members (list people and companies contacted).		☐ Test at least one sample of produce for microbial contamination (target E. coli <10/g and Salmonella ND/25g). Discuss with relevant Salad Producers' Forum members before sampling to determine if additional tests are required (list people and companies contacted).	

Decision Guide Record – Non-synthetic fertilisers

To be completed when working through Decision Guide – Non-synthetic fertilisers

Site identification: _____ Date: _____ Completed by: _____

Non-synthetic fertiliser(s) assessed: _____

Risks identified	Steps taken to address	Outcome / notes	Further action needed	Outcome / notes
☐ Composts or treated products used.	☐ Supplier certified to AS 4454, NASAA or ACO for production of this non-synthetic fertiliser. **Certified supplier** ☐ Obtain a copy of certificate AND obtain a certificate of analysis less than 12 months old, that shows non-synthetic fertiliser meets specification (E. coli <10/g and Salmonella ND/25g). **Non certified supplier** ☐ Obtain a certificate of analysis for every batch purchased (target E. coli <10/g and Salmonella ND/25g) AND ensure that treatment records (time and temperature) are available on request.		☐ Certificate of analysis does not meet specification (If evidence is not obtained show E. coli <10/g and Salmonella ND/25g). ☐ Do not harvest until discussed with relevant Salad Producers' Forum member(s) (list people and companies contacted ☐ Test at least one sample of produce for microbial contamination (target E. coli <10/g and Salmonella ND/25g). Discuss with relevant Salad Producers' Forum members before sampling to determine if additional tests are required (list people and companies contacted).	
☐ Raw/untreated products are being used on your farm.	☐ Salad Producers' Forum members will not accept this crop.			

Decision Guide Record – Pre harvest water

To be completed when working through Decision Guide – Pre harvest water

Water source: _____ Date: _____ Completed by: _____

Risks identified	Steps taken to address	Outcome / notes	Additional actions	Outcome / notes
☐ Water does not meet microbiological specification (E. coli ≤126/100ml).	☐ Do not harvest until discussed with all relevant members of the Salad Producer Forum (list people and companies contacted).		☐ Test at least one sample of produce for microbial contamination (target E. coli <10/g and Salmonella ND/25g). Discuss with relevant Salad Producers' Forum members before sampling to determine if additional tests are required (list people and companies contacted) ☐ Identify the source of contamination. ☐ Take steps to address the problem. ☐ Retest water.	

Decision Guide Record – Site assessment

To be completed when working through Decision Guide – Site assessment

Site identification: _____ Date: _____ Completed by: _____

Risks identified	Steps taken to address	Outcome / notes	Potential further corrective action	Outcome / notes
☐ Land has been used for livestock production in the last 12 months.	☐ Do not use land for salad production for a period of 12 months.		☐ Land subject to multiple workings and irrigation to maximise opportunity to kill any potential human pathogens. ☐ Before planting with salad crops, test soil for microbial contamination (target E. coli <10/g, Salmonella ND/25g) ☐ Prior to commercial harvest, test at least one sample of produce (target E.coli <10/g, Salmonella ND/25g). ☐ Discuss situation with relevant Salad Producers' Forum members to determine additional actions / testing (list people and companies contacted).	

Site identification: _____ Date: _____ Completed by: _____

Risks identified	Steps taken to address	Outcome / notes	Potential further corrective action	Outcome / notes
☐ Cadmium uptake may exceed legal limits (leafy green salad vegetables and root crops only).	☐ Assess soil type and condition. ☐ Assess irrigation water.		☐ Test produce for cadmium levels (target <0.1mg/kg). ☐ If test results are <0.05mg/kg, retest every three years. If test results are greater than the legal limit, retest every year. ☐ If test results exceed the legal limit, advise all customers immediately. Salad production at this site should not continue.	
☐ Lead uptake may exceed legal limits (leafy green salad vegetables and root crops only).	☐ Assess site history and location.		☐ Test soil for lead prior to planting. If soil levels exceed 400ppm, further technical advice is required. ☐ Test produce for lead levels (target <0.1mg/kg).	

Risks identified	Steps taken to address	Outcome / notes	Potential further corrective action	Outcome / notes
☐ Physical contamination of produce caused by rubbish / debris in soil.	☐ Inspect ground before and during preparation.		☐ Do not crop areas with high levels of physical contamination or areas close to roadways.	
☐ Contamination of soil/produce from persistent chemicals.	☐ Consider whether persistent chemicals may be present.		☐ Test produce for the presence of likely persistent chemicals. ☐ If levels exceed the legal limit, immediately advise all relevant customers of the result. ☐ Salad production at this site should not continue. ☐ Mark potentially contaminated sites on your farm map.	
☐ Insufficient supply of good quality water.	☐ Work through the Decision Guide Pre harvest water.		☐ Do not continue until water requirements are met. ☐ Secure additional water sources.	

Non-synthetic Fertiliser Application Record

Block Identification: ____

Date	Time	Wind speed/ direction	Product(s) used	Batch number(s) if available	Application method	Operator	Post application incorporation method/date *(e.g. Rotera, 06/01/08)*	Operator

Pre harvest checklist

Date: _____ Completed by: _____

Harvest location / block name: _____

Check List	Yes/No/ NA	Action Required
Clearance to harvest		
Agricultural chemical withholding periods have been checked and crop is safe to harvest		
Staff and facilities		
Toilets are clean and hygienic		
Portable toilets are positioned appropriately		
Hand washing facilities available including:		
• running water		
• soap on tap (cakes / bars not acceptable)		
• paper towel		
• sanitiser		
Today's harvest crew are:		
• trained in food safety and personal hygiene requirements		
• are aware of product specification(s)		
• aware of sources of physical contamination		
Blue bandaids available		

Check List	Yes/No/ NA	Action Required
Site / produce requirements		
Site has been checked for stinging nettles, deadly nightshade and thorns		
These weeds have been removed or harvest crew alerted to their presence		
Site relatively free of frogs and insects.		
Harvest crew alerted to the presence of frogs and insects.		
Site has been checked for physical contaminants such as fertiliser, snail bait, glass		
Contaminants removed		
Site has been checked for evidence of animal activity		
No evidence of faecal material on produce		
All dead birds/animals removed		
Produce which has come in contact with dead birds/animals is isolated /discarded		
A 10m wide buffer zone has been created around flooded area		
Produce which has been in direct contact with flood water is not harvested		
Tools / equipment		
Harvesting equipment is:		
• free from oil leaks		
• food contact surfaces are clean		
• in good condition – all nuts and bolts tight		
• checked for damage to glass / hard plastics		
Harvesting tools such as knives cleaned and sanitised before use		
Only company provided knives are used for harvest		
Knives are accounted for:		
• Number issued		
• Number returned		
Bins/tubs/crates are:		
• clean and free of damage		
• not placed directly on the ground		

Return-to-work policy

- As part of the Salad GAP requirements, staff who appear to be ill, or report illness, must not handle produce.
- Symptoms of illness may include (but are not limited to):
    - nausea
    - vomiting
    - diarrhoea
- Staff are required to report illness to their supervisors.
- Supervisors have the authority to reassign staff who appear to be ill, to non food contact roles.
- These staff must be excluded from roles involving product or packaging, and as much as is practicable, be separated from other staff involved with product handling.
- Return to work in a food contact role will be assessed on a case-by-case basis, which may involve staff:
    - not being allowed to return to food handling activities until a doctor's certificate is produced indicating that the person is fit to resume food handling activities
    - not returning to work until they are free of symptoms for 48 hours after suffering from vomiting and/or diarrhoea
- A staff illness register will be maintained by the supervisor, which contains the following information:
    - Employee’s name
    - Date of absence / reassignment
    - Type of illness (or symptoms displayed)
    - Return date
- Information regarding an illness that is reported to the supervisor shall not be disclosed to another person without the consent of the individual.

Spray Diary

Date	Crop	Block Id.	Target	Chemical		WHP / EHD* Rate	Wind Speed / Direction	Operator initials
				Name/Batch	Rate			

Staff Illness Register

CONFIDENTIAL

Employee name	Date of absence / reassignment	Type of illness / symptoms displayed	Return date

Insert business name and contact details

Date:

Dear (insert name)

We have recently implemented Salad GAP, and as such are required to ensure subcontractors abide by certain Salad GAP requirements.

Agricultural Chemical Suppliers

To become an approved supplier of Agricultural Chemicals, suppliers must:

- Ensure all chemicals are within Use By dates
- Ensure containers are intact and not leaking
- Be AgSafe accredited
- Provide a current copy of Material Safety Data Sheets for all chemicals supplied
- When visiting our business, adhere to the following site security requirements:
  - Restricted access to production areas
  - Make an appointment / ring before arriving on site
  - Ensure vehicles and clothing are practically clean
  - Abide by food safety and personal hygiene requirements if handling produce or entering production sites

We would appreciate you acknowledging your ability to meet these requirements by completing the section below and returning as soon as possible.

Sincerely,

Insert manager or delegate name

We _____ acknowledge the requirements of Salad GAP and agree to:

- ☐ Ensure all chemicals are within Use By dates
- ☐ Ensure containers are intact and not leaking
- ☐ Be AgSafe accredited
- ☐ Provide a current copy of Material Safety Data Sheets for all chemicals supplied
- ☐ When visiting your business, adhere to the following site security requirements:
  - Access to production areas is restricted
  - An appointment must be made before arriving on site
  - Vehicles and clothing must be practically clean
  - Food safety and personal hygiene requirements must be abided by if handling produce or entering production sites

Signature: _____

Date: _____

Insert business name and contact details

Date:

Dear (insert name)

We have recently implemented Salad GAP, and as such are required to ensure subcontractors abide by certain Salad GAP requirements.

Agronomist / technical advisor

To become an approved supplier of agronomical advice, suppliers must:

- Be appropriately certified / qualified and provide details of these qualifications
- Make all recommendations in writing
- Ensure all agricultural chemical recommendations are in accordance with label or permit specifications
- Ensure recommendations take into account withholding periods (WHP) and anticipated harvest dates
- When visiting our business, adhere to the following site security requirements:
  - Restricted access to production areas
  - Make an appointment / ring before arriving on site
  - Ensure vehicles and clothing are practically clean
  - Abide by food safety and personal hygiene requirements if handling produce or entering production sites

We would appreciate you acknowledging your ability to meet these requirements by completing the section below and returning as soon as possible.

Sincerely,

Insert manager or delegate name

We _____ acknowledge the requirements of Salad GAP and agree to:

- ☐ Be appropriately certified / qualified and provide details of these qualifications
- ☐ Make all recommendations in writing
- ☐ Ensure all agricultural chemical recommendations are in accordance with label or permit specifications
- ☐ Ensure recommendations take into account withholding periods (WHP) and anticipated harvest dates
- ☐ When visiting your business, adhere to the following site security requirements:
  - Access to production areas is restricted
  - An appointment must be made before arriving on site
  - Vehicles and clothing must be practically clean
  - Food safety and personal hygiene requirements must be abided by if handling produce or entering production sites

Signature: _____

Date: _____

Insert business name and contact details

Date:

Dear (insert name)

We have recently implemented Salad GAP, and as such are required to ensure subcontractors abide by certain Salad GAP requirements.

Bin / tub / crate suppliers

To become an approved supplier of bins, tubs and / or crates, suppliers must:

- Use only approved chemicals in cleaning and sanitising
- Ensure bins / tubs / crates supplied have been cleaned and transported in a hygienic manner
- Ensure bins / tubs / crates are constructed from food grade material
- Ensure bins / tubs / crates are free from splits and breakage
- Provide a copy of food safety / quality management certification upon request
- When visiting our business, adhere to the following site security requirements:
  - Restricted access to production areas
  - Make an appointment / ring before arriving on site
  - Ensure vehicles and clothing are practically clean
  - Abide by food safety and personal hygiene requirements if handling produce or entering production sites

We would appreciate you acknowledging your ability to meet these requirements by completing the section below and returning as soon as possible.

Sincerely,

Insert manager or delegate name

We _____ acknowledge the requirements of Salad GAP and agree to:

- ☐ Use only approved chemicals in cleaning and sanitising
- ☐ Ensure bins / tubs / crates supplied have been cleaned and transported in a hygienic manner
- ☐ Ensure bins / tubs / crates are constructed from food grade material
- ☐ Ensure bins / tubs / crates are free from splits and breakage
- ☐ Provide a copy of food safety / quality management certification upon request
- ☐ When visiting your business, adhere to the following site security requirements:
  - Access to production areas is restricted
  - An appointment must be made before arriving on site
  - Vehicles and clothing must be practically clean
  - Food safety and personal hygiene requirements must be abided by if handling produce or entering production sites

Signature: _____

Date: _____

Insert business name and contact details

Date:

Dear (insert name)

We have recently implemented Salad GAP, and as such are required to ensure subcontractors abide by certain Salad GAP requirements.

Calibration services

To become an approved supplier of calibration services, suppliers must:

- Be a licensed certifier as per the relevant state legislation i.e. Trade Measurement Act
- Provide a record of results of calibration
- When visiting our business, adhere to the following site security requirements:
    - Restricted access to production areas
    - Make an appointment / ring before arriving on site
    - Ensure vehicles and clothing are practically clean
    - Abide by food safety and personal hygiene requirements if handling produce or entering production sites

We would appreciate you acknowledging your ability to meet these requirements by completing the section below and returning as soon as possible.

Sincerely,

Insert manager or delegate name

We _____ acknowledge the requirements of Salad GAP and agree to:

- ☐ Be a licensed certifier as per the relevant state legislation i.e. Trade Measurement Act
- ☐ Provide a record of results of calibration
- ☐ When visiting your business, adhere to the following site security requirements:
    - Access to production areas is restricted
    - An appointment must be made before arriving on site
    - Vehicles and clothing must be practically clean
    - Food safety and personal hygiene requirements must be abided by if handling produce or entering production sites

Signature: _____

Date: _____

Insert business name and contact details

Date:

Dear (insert name)

We have recently implemented Salad GAP, and as such are required to ensure subcontractors abide by certain Salad GAP requirements.

Cleaning Chemical Suppliers

To become an approved supplier of cleaning chemicals, suppliers must:

- Ensure all cleaning chemicals supplied are food grade and provide proof of this
- Provide appropriate advice on usage of chemicals, including rates and instructions on preparation, handling and use
- Provide a current copy of Material Safety Data Sheets for all chemicals supplied
- When visiting our business, adhere to the following site security requirements:
    - Restricted access to production areas
    - Make an appointment / ring before arriving on site
    - Ensure vehicles and clothing are practically clean
    - Abide by food safety and personal hygiene requirements if handling produce or entering production sites

We would appreciate you acknowledging your ability to meet these requirements by completing the section below and returning as soon as possible.

Sincerely,

Insert manager or delegate name

We _____ acknowledge the requirements of Salad GAP and agree to:

- ☐ Ensure all cleaning chemicals supplied are food grade and provide proof of this
- ☐ Provide appropriate advice on usage of chemicals, including rates and instructions on preparation, handling and use
- ☐ Provide a current copy of Material Safety Data Sheets for all chemicals supplied
- ☐ When visiting your business, adhere to the following site security requirements:
    - Access to production areas is restricted
    - An appointment must be made before arriving on site
    - Vehicles and clothing must be practically clean
    - Food safety and personal hygiene requirements must be abided by if handling produce or entering production sites

Signature: _____

Date: _____

Insert business name and contact details

Date:

Dear (insert name)

We have recently implemented Salad GAP, and as such are required to ensure subcontractors abide by certain Salad GAP requirements.

Contract labour suppliers

To become an approved supplier of contract labour, suppliers must:

- Provide requested number of appropriately trained staff
- All labour supplied have been trained in the food safety and personal hygiene requirements of Salad GAP. A copy is attached and visual training aids are also available on request.
- When visiting our business, adhere to the following site security requirements:
    - Restricted access to production areas
    - Make an appointment / ring before arriving on site
    - Ensure vehicles and clothing are practically clean
    - Abide by food safety and personal hygiene requirements if handling produce or entering production sites

We would appreciate you acknowledging your ability to meet these requirements by completing the section below and returning as soon as possible.

Sincerely,

Insert manager or delegate name

We _____ acknowledge the requirements of Salad GAP and agree to:

- ☐ Provide requested number of appropriately trained staff
- ☐ All labour supplied have been trained in the food safety and personal hygiene requirements of Salad GAP. A copy has been received.
- ☐ Visual training aids requested.
- ☐ When visiting your business, adhere to the following site security requirements:
    - Access to production areas is restricted
    - An appointment must be made before arriving on site
    - Vehicles and clothing must be practically clean
    - Food safety and personal hygiene requirements must be abided by if handling produce or entering production sites

Signature: _____

Date: _____

Training Notes – Handout

Introduction

- The health and hygiene of staff and visitors directly impacts the food safety of product as human pathogens and other contaminants can be transmitted by hand contact or by sneezing, coughing or spitting (or worse) on product.
- Staff and visitors can also inadvertently be responsible for physical contamination of product by taking various items out into the paddock / field / garden.
- Adequate facilities must be provided for staff, such as toilets and hand washing facilities, and there must be designated areas for eating and smoking.
- Staff and visitors can also introduce contaminants on their clothing or vehicles, so care is required in this regard as well.
- All staff, including casuals, must be trained in Salad GAP food safety and personal hygiene requirements.

Eating and smoking

- Smoking and eating may only take place in crop free areas.

Spitting

- Spitting is prohibited.

Toilets

- Toilet facilities to be used.

Handwashing

- Hands to be washed after using the toilet, smoking or eating.

Gloves

- Gloves must be removed before using the toilet, smoking or eating.
- If non disposable gloves are used in roles where there is direct product contact they must be washed and sanitised at least daily.
- These gloves must be dry before reuse.

Jewellery

- No visible jewellery is to be worn, with the exception of a plain wedding band and sleeper earrings.
- Any visible stud earrings or body piercings that cannot be removed must be taped or covered with a blue bandaid.
- Necklaces must be removed or completely covered by clothing.

Hair restraints

- All staff to wear caps, or hair to be tied back and contained.
- A baseball cap or similar is sufficient, hair nets are not required.
- Head wear must be subject to regular washing.

Clothing

- Clothing must not be ripped or torn, and must be visually clean at the beginning of the day / prior to commencing harvest or any product handling activity.
- Ideally, all outer clothing above waist height should not have external pockets.
- Footwear, including gumboots, should be cleaned as necessary to ensure product is not contaminated and that it does not pose a biosecurity, weed or disease threat.

Wounds

- All open wounds must be covered with a clean waterproof bandaid / dressing.
- All bandaids / dressings must be changed at least daily.
- Only blue bandaids are permitted in food handling roles.
- It is preferable that staff with wounds also wear non latex disposable gloves.

Illness

- Staff are required to report illness (such as symptoms of nausea, vomiting, diarrhoea) and will be given non-food contact jobs.
- Non food contact roles include:
    - Tractor operation
    - Fencing
    - Equipment maintenance
    - Office work

Physical contamination

Examples of physical contamination are:

- Weeds
- Insects
- Frogs / animals
- Glass
- Hair (human or animal)
- Cigarette butts
- Knives
- Keys
- Plastic of all types
- Blades
- Tree seeds
- Rubber
- Nuts, bolts and oil
- Fencing wire
- Foreign bodies in soil
- Nails

- Rubbish must not be left in the paddock / field / garden.
- With the exception of supervisors, and emergency situations, pens, pencils, mobile phones and other similar items must not be taken into the paddock / field / garden.
- Personal items must be kept in a staff room or other designated area unless specifically approved by a supervisor.
- No personal items (other than plastic bottles containing water) to be taken into paddock / field / garden.

Weeds

- Supervisors and key harvest staff must be aware of the food safety risk of certain weeds and have the ability to identify them:
    - Stinging nettles – can cause anaphylactic response.
    - Deadly nightshade
    - Thorns

Insert business name and contact details

Date:

Dear (insert name)

We have recently implemented Salad GAP, and as such are required to ensure subcontractors abide by certain Salad GAP requirements.

Non-synthetic fertiliser supplier

To become an approved supplier of non-synthetic fertiliser, suppliers must:

- Ensure packaging is intact and there is no leakage or possibility of contamination
- Ensure fertiliser is mixed to correct specifications and is of good quality
- When visiting our business, adhere to the following site security requirements:
    - Restricted access to production areas
    - Make an appointment / ring before arriving on site
    - Ensure vehicles and clothing are practically clean
    - Abide by food safety and personal hygiene requirements if handling produce or entering production sites
- Ensure fertilisers are subject to regular microbiological analysis and meet the following microbiological specifications
    - <10 E coli/g
    - Salmonella Not Detected/25g

EITHER

- Be certified to AS 4454, ACO or NASAA for the production of composts **and** at least annually provide a copy of a Certificate of Analysis for the fertiliser supplied (<10 E coli/g and Salmonella Not Detected/25g)

OR

- Work to the pasteurization requirements detailed in AS 4454, specifically:
    - Fertilisers must have been subject to appropriate turning of outer material to the inside of the windrow so that the whole mass is subject to a minimum of three turns with the internal temperature reaching a minimum of 55^{o}C for three consecutive days before each turn
    - Records of time and temperature monitoring must be available if required
    - Certificates of Analysis must be provided with each batch of fertiliser supplied (<10 E coli/g and Salmonella Not Detected/25g)

We would appreciate you acknowledging your ability to meet these requirements by completing the section on the next page and returning as soon as possible.

Sincerely,

Insert manager or delegate name

We _____ acknowledge the requirements of Salad GAP and agree to:

- ☐ Ensure packaging is intact and there is no leakage or possibility of contamination
- ☐ Ensure fertiliser is mixed to correct specifications and is of good quality
- ☐ When visiting your business, adhere to the following site security requirements:
    - Access to production areas is restricted
    - An appointment must be made before arriving on site
    - Vehicles and clothing must be practically clean
    - Food safety and personal hygiene requirements must be abided by if handling produce or entering production sites
- ☐ Ensure fertilisers are subject to regular microbiological analysis and meet the following microbiological specifications
    - <10 E coli/g
    - Salmonella Not Detected/25g

EITHER

- ☐ Be certified to AS 4454, ACO or NASAA certification for the production of composts **and** at least annually provide a copy of a Certificate of Analysis for the fertiliser supplied (<10 E coli/g and Salmonella Not Detected/25g)

OR

- ☐ Work to the pasteurization requirements detailed in AS 4454, specifically:
    - Fertilisers must have been subject to appropriate turning of outer material to the inside of the windrow so that the whole mass is subject to a minimum of three turns with the internal temperature reaching a minimum of 55^{o}C for three consecutive days before each turn
    - Records of time and temperature monitoring must be available if required
    - Certificates of Analysis must be provided with each batch of fertiliser supplied (<10 E coli/g and Salmonella Not Detected/25g)

Signature: _____

Date: _____

Insert business name and contact details

Date:

Dear (insert name)

We have recently implemented Salad GAP, and as such are required to ensure subcontractors abide by certain Salad GAP requirements.

Packaging suppliers

To become an approved supplier of packaging, suppliers must:

- Ensure packaging delivered meet specifications as detailed on order, with particular attention to colours and labelling requirements
- Provide only food grade packaging
- Ensure packaging is clean and protected from contamination during delivery
- When visiting our business, adhere to the following site security requirements:
    - Restricted access to production areas
    - Make an appointment / ring before arriving on site
    - Ensure vehicles and clothing are practically clean
    - Abide by food safety and personal hygiene requirements if handling produce or entering production sites

We would appreciate you acknowledging your ability to meet these requirements by completing the section below and returning as soon as possible.

Sincerely,

Insert manager or delegate name

We _____ acknowledge the requirements of Salad GAP and agree to:

- ☐ Ensure packaging delivered meet specifications as detailed on order, with particular attention to colours and labelling requirements
- ☐ Provide only food grade packaging
- ☐ Ensure packaging is clean and protected from contamination during delivery
- ☐ When visiting your business, adhere to the following site security requirements:
    - Access to production areas is restricted
    - An appointment must be made before arriving on site
    - Vehicles and clothing must be practically clean
    - Food safety and personal hygiene requirements must be abided by if handling produce or entering production sites

Signature: _____

Date: _____

Insert business name and contact details

Date:

Dear (insert name)

We have recently implemented Salad GAP, and as such are required to ensure subcontractors abide by certain Salad GAP requirements.

Pest control contractors

To become an approved supplier of pest control services, suppliers must:

- Provide written records of inspections, pest levels and action taken after each visit
- Provide a map of bait station locations
- Ensure all chemicals / baits supplied or recommended by your business are approved for use
- Provide current copies of Material Safety Data Sheets for all products used on site
- Ensure site inspection frequency is appropriate, and increase frequency if required or requested
- When visiting our business, adhere to the following site security requirements:
    - Restricted access to production areas
    - Make an appointment / ring before arriving on site
    - Ensure vehicles and clothing are practically clean
    - Abide by food safety and personal hygiene requirements if handling produce or entering production sites

We would appreciate you acknowledging your ability to meet these requirements by completing the section below and returning as soon as possible.

Sincerely,

Insert manager or delegate name

We _____ acknowledge the requirements of Salad GAP and agree to:

- ☐ Provide written records of inspections, pest levels and action taken after each visit
- ☐ Provide a map of bait station locations
- ☐ Ensure all chemicals / baits supplied or recommended by our business are approved for use
- ☐ Provide current copies of Material Safety Data Sheets for all products used on site
- ☐ Ensure site inspection frequency is appropriate, and increase frequency if required or requested
- ☐ When visiting your business, adhere to the following site security requirements:
    - Access to production areas is restricted
    - An appointment must be made before arriving on site
    - Vehicles and clothing must be practically clean
    - Food safety and personal hygiene requirements must be abided by if handling produce or entering production sites

Signature: _____

Date: _____

Insert business name and contact details

Date:

Dear (insert name)

We have recently implemented Salad GAP, and as such are required to ensure subcontractors abide by certain Salad GAP requirements.

Portable Toilet Supplier

To become an approved supplier of portable toilets, suppliers must:

- Ensure portable toilets supplied are clean and hygienic
- Position portable toilets so as not to pose a contamination risk to produce
- Position portable toilets to maximise accessibility
- Empty portable toilets regularly and in a way that does not pose a contamination risk to produce
- When visiting our business, adhere to the following site security requirements:
    - Restricted access to production areas
    - Make an appointment / ring before arriving on site
    - Ensure vehicles and clothing are practically clean
    - Abide by food safety and personal hygiene requirements if handling produce or entering production sites

We would appreciate you acknowledging your ability to meet these requirements by completing the section below and returning as soon as possible.

Sincerely,

Insert manager or delegate name

We _____ acknowledge the requirements of Salad GAP and agree to:

- ☐ Ensure portable toilets supplied are clean and hygienic
- ☐ Position portable toilets so as not to pose a contamination risk to produce
- ☐ Position portable toilets to maximise accessibility
- ☐ Empty portable toilets regularly and in a way that does not pose a contamination risk to produce
- ☐ When visiting your business, adhere to the following site security requirements:
    - Access to production areas is restricted
    - An appointment must be made before arriving on site
    - Vehicles and clothing must be practically clean
    - Food safety and personal hygiene requirements must be abided by if handling produce or entering production sites

Signature: _____

Date: _____

Insert business name and contact details

Date:

Dear (insert name)

We have recently implemented Salad GAP, and as such are required to ensure subcontractors abide by certain Salad GAP requirements.

Seedling Suppliers

To become an approved supplier of seedlings, suppliers must:

- Ensure seedling trays are free from contaminants i.e. cigarette butts
- Provide only healthy and disease free plants
- Provide seedlings of the age / growth stage and variety requested
- When visiting our business, adhere to the following site security requirements:
  - Restricted access to production areas
  - Make an appointment / ring before arriving on site
  - Ensure vehicles and clothing are practically clean
  - Abide by food safety and personal hygiene requirements if handling produce or entering production sites

We would appreciate you acknowledging your ability to meet these requirements by completing the section below and returning as soon as possible.

Sincerely,

Insert manager or delegate name

We _____ acknowledge the requirements of Salad GAP and agree to:

- ☐ Ensure seedling trays are free from contaminants i.e. cigarette butts
- ☐ Provide only healthy and disease free plants
- ☐ Provide seedlings of the age / growth stage and variety as requested
- ☐ When visiting your business, adhere to the following site security requirements:
  - Access to production areas is restricted
  - An appointment must be made before arriving on site
  - Vehicles and clothing must be practically clean
  - Food safety and personal hygiene requirements must be abided by if handling produce or entering production sites

Signature: _____

Date: _____

Insert business name and contact details

Date:

Dear (insert name)

We have recently implemented Salad GAP, and as such are required to ensure subcontractors abide by certain Salad GAP requirements.

Spray Contractors

To become an approved supplier of spray contracting services, suppliers must:

- Apply chemicals in accordance with label or permit conditions
- Hold appropriate accreditation i.e. commercial spray licence
- Record all agricultural chemical applications including:
  - Name and variety of crop
  - Paddock identification
  - Date applied
  - Name of operator who applied chemical
  - Name of the pest, disease or weed targeted (if requested by the grower)
  - Name of person who recommended the application
  - Rate applied
  - Withholding period
- Ensure application equipment is kept in good condition and calibrated at least annually and when nozzles are changed or equipment modified
- Dispose of surplus application mix or tank washings according to local legislation and recommendations
- Ensure agricultural chemicals are stored, handled and disposed of in accordance with local regulations
- When visiting our business, adhere to the following site security requirements:
  - Restricted access to production areas
  - Make an appointment / ring before arriving on site
  - Ensure vehicles and clothing are practically clean
  - Abide by food safety and personal hygiene requirements if handling produce or entering production sites

We would appreciate you acknowledging your ability to meet these requirements by completing the section on the next page and returning as soon as possible.

Sincerely,

Insert manager or delegate name

We _____ acknowledge the requirements of Salad GAP and agree to:

- ☐ Apply chemicals in accordance with label or permit conditions
- ☐ Hold appropriate accreditation i.e. commercial spray licence, ChemCert
- ☐ Record all agricultural chemical applications including:
    - Name and variety of crop
    - Paddock / block identification
    - Date applied
    - Name of operator who applied chemical
    - Name of the pest, disease or weed targeted (if requested by the grower)
    - Name of person who recommended the application
    - Rate applied
    - Withholding period
- ☐ Ensure application equipment is kept in good condition and calibrated at least annually and when nozzles are changed or equipment modified
- ☐ Dispose of surplus application mix or tank washings according to local legislation and recommendations
- ☐ Ensure agricultural chemicals are stored, handled and disposed of in accordance with local regulations
- ☐ When visiting your business, adhere to the following site security requirements:
    - Access to production areas is restricted
    - An appointment must be made before arriving on site
    - Vehicles and clothing must be practically clean
    - Food safety and personal hygiene requirements must be abided by if handling produce or entering production sites

Signature: _____

Date: _____

Insert business name and contact details

Date:

Dear (insert name)

We have recently implemented Salad GAP, and as such are required to ensure subcontractors abide by certain Salad GAP requirements.

Synthetic fertiliser supplier

To become an approved supplier of synthetic fertiliser, suppliers must:

- Ensure packaging is intact and there is no leakage or possibility of contamination
- Ensure fertiliser is mixed to correct specifications and is of good quality, free flowing and dry
- Fertilisers recommended for use are to contain low levels of cadmium:
  - Maximum permitted cadmium in Trace element fertilisers ranges from 50 – 80mg/kg
  - Maximum permitted cadmium level in Phosphogypsum fertiliser ranges from 10 – 80 mg/ kg
  - Maximum permitted cadmium level in Phosphatic fertilisers is 300mg of cadmium per kilogram of phosphorous
- When visiting your business, adhere to the following site security requirements:
  - Access to production areas is restricted
  - An appointment must be made before arriving on site
  - Vehicles and clothing must be practically clean
  - Food safety and personal hygiene requirements must be abided by if handling produce or entering production

We would appreciate you acknowledging your ability to meet these requirements by completing the section on the next page and returning as soon as possible.

Sincerely,

Insert manager or delegate name

We _____ acknowledge the requirements of Salad GAP and agree to:

- □ Ensure packaging is intact and there is no leakage or possibility of contamination
- □ Ensure fertiliser is mixed to correct specifications and is of good quality, free flowing and dry
- □ Fertilisers recommended for use are to contain low levels of cadmium:
  - Maximum permitted cadmium level in Trace element fertilisers ranges from 50 – 80 mg/kg
  - Maximum permitted cadmium level in Phosphogypsum fertiliser ranges from 10 – 80 mg/ kg
  - Maximum permitted cadmium level in Phosphatic fertilisers is 300mg of cadmium per kilogram of phosphorous

□ When visiting your business, adhere to the following site security requirements:
  - Access to production areas is restricted
  - An appointment must be made before arriving on site
  - Vehicles and clothing must be practically clean
  - Food safety and personal hygiene requirements must be abided by if handling produce or entering production sites

Signature: _____

Date: _____

Insert business name and contact details

Date:

Dear (insert name)

We have recently implemented Salad GAP, and as such are required to ensure subcontractors abide by certain Salad GAP requirements.

Transport Companies

To become an approved supplier of transport services, suppliers must:

- Implement a regular cleaning schedule to minimise contamination
- Ensure the vehicle be free from foreign matter / odour
- Maintain vehicles at appropriate temperature
- Maintain temperature records to verify temperature during transit
- Ensure produce is not transported with non food items or potential contaminants such as chemicals or fuels
- When visiting our business, adhere to the following site security requirements:
    - Restricted access to production areas
    - Make an appointment / ring before arriving on site
    - Ensure vehicles and clothing are practically clean
    - Abide by food safety and personal hygiene requirements if handling produce or entering production sites

We would appreciate you acknowledging your ability to meet these requirements by completing the section below and returning as soon as possible.

Sincerely,

Insert manager or delegate name

We _____ acknowledge the requirements of Salad GAP and agree to:

- ☐ Implement a regular cleaning schedule to minimise contamination
- ☐ Ensure the vehicle be free from foreign matter / odour
- ☐ Maintain vehicles at appropriate temperature
- ☐ Maintain temperature records to verify temperature during transit
- ☐ Ensure produce is not transported with non food items or potential contaminants such as chemicals or fuels
- ☐ When visiting your business, adhere to the following site security requirements:
    - Access to production areas is restricted
    - An appointment must be made before arriving on site
    - Vehicles and clothing must be practically clean
    - Food safety and personal hygiene requirements must be abided by if handling produce or entering production sites

Signature: _____

Date: _____

Insert business name and contact details

Date:

Dear (insert name)

We have recently implemented Salad GAP, and as such are required to ensure subcontractors abide by certain Salad GAP requirements.

Water Supplier

To become an approved supplier of water, suppliers must:

- Ensure water supplied for post harvest use is potable and have E coli levels ≤126 cfu/g
- Undertake regular microbiological testing, and provide records of testing upon request
- When visiting our business, adhere to the following site security requirements:
    - Restricted access to production areas
    - Make an appointment / ring before arriving on site
    - Ensure vehicles and clothing are practically clean
    - Abide by food safety and personal hygiene requirements if handling produce or entering production sites

We would appreciate you acknowledging your ability to meet these requirements by completing the section below and returning as soon as possible.

Sincerely,

Insert manager or delegate name

We _____ acknowledge the requirements of Salad GAP and agree to:

- ☐ Ensure water supplied for post harvest use is potable and have E coli levels ≤126 cfu/g
- ☐ Undertake regular microbiological testing, and provide records of testing upon request
- ☐ When visiting your business, adhere to the following site security requirements:
    - Access to production areas is restricted
    - An appointment must be made before arriving on site
    - Vehicles and clothing must be practically clean
    - Food safety and personal hygiene requirements must be abided by if handling produce or entering production sites

Signature: _____

Date: _____

Training Record

Once training is delivered, the employee is required to sign and date the relevant box.

Topic / Name	Food Safety & Personal Hygiene requirements	Chemical Use and Handling		
	Sign:	Sign:	Sign:	Sign:
	Date:	Date:	Date:	Date:
	Sign:	Sign:	Sign:	Sign:
	Date:	Date:	Date:	Date:
	Sign:	Sign:	Sign:	Sign:
	Date:	Date:	Date:	Date:
	Sign:	Sign:	Sign:	Sign:
	Date:	Date:	Date:	Date:
	Sign:	Sign:	Sign:	Sign:
	Date:	Date:	Date:	Date:
	Sign:	Sign:	Sign:	Sign:
	Date:	Date:	Date:	Date:
	Sign:	Sign:	Sign:	Sign:
	Date:	Date:	Date:	Date:
	Sign:	Sign:	Sign:	Sign:
	Date:	Date:	Date:	Date:
	Sign:	Sign:	Sign:	Sign:
	Date:	Date:	Date:	Date:

~~APPENDIX~~ 7 – Freshcare Newsletter Winter 2010 – Highlighting SaladGAP Administration

Freshcare News

Issue 22 - Autumn / Winter 2010

Freshcare Code of Practice – Food Safety and Quality – 3rd Edition

The 3rd Edition Code of Practice has been generally well received by members and has been widely accepted by Customer groups – ensuring Freshcare maintains its position as a practical, cost-effective on farm assurance program delivering consistent food safety and quality outcomes.

The 3rd Edition Code has a more logical, more user-friendly structure and includes improved hazard analysis tools and guidance information, plus practices for managing emerging issues such as allergen control. Code elements from the 2nd Edition have also been reviewed and in many instances strengthened.

All Freshcare members and businesses moving from other on-farm food safety programs, must undertake Approved Freshcare Training before they can be Audited and Certified to the 3rd Edition Code of Practice.

This training requirement was identified as essential to ensure effective implementation of the 3rd Edition Code, it was also a specified requirement from key customer groups to ensure ongoing approval of the Freshcare Food Safety and Quality Code.

IMPORTANT - All Freshcare Audits after the 1st March 2011 will be to the 3rd Edition Food Safety and Quality Code.

FarmReady Supports Freshcare Members - Training Fully Funded for Eligible Primary Producers

Over 1800 Freshcare members have already made the transition from the 2nd Edition Code of Practice—Food Safety and Quality, to the new 3rd Edition Food Safety and Quality Code released in late 2009.

All these members have been able to access funding for their 'Transition Training' and out of pocket expenses, from the Federal Governments FarmReady Program.

Freshcare members who are yet to undertake their 3rd Edition training are strongly encouraged to schedule and complete training as soon as possible, in order to take advantage of the available FarmReady funding.

The FarmReady Program is scheduled to continue until 2012, we have been advised that funding will almost certainly continue until 31st December 2010; funding in 2011 may depend on the Federal Election result.

Nothing is ever certain – schedule your Freshcare 3rd Edition Training as soon as possible.

The FarmReady Reimbursement Grant Program

The FarmReady Program is a Federal Government initiative, providing grants up to $1,500 per year to eligible primary producers to undertake approved training courses. FarmReady Funding is available for the following Freshcare Courses:

- Food Safety & Quality - Full training for new members.
- Food Safety & Quality - Transition training to 3rd Edition.
- Environmental.
- Environmental - Viticulture.

The FarmReady funding covers the full cost of the course and any eligible out-of-pocket expenses incurred to attend training.

FarmReady Funding must be applied for and approved at least 10 days before your scheduled training course. Once you have completed training, you only have 30 days from the date of training to submit your 'Reimbursement Claim' – this period will not be extended by FarmReady under any circumstances, so make sure you claim quickly.

For further information on the FarmReady Program, contact your Freshcare trainer or visit the FarmReady website: www.farmready.gov.au

Customer Update

Both Coles and Woolworths have set clear timeframes for growers to move to the 3rd Edition Code of Practice.

Coles Direct Suppliers – All Freshcare audits conducted after 1st March 2010 must have been to the 3rd Edition Code of Practice; in addition Coles Direct Suppliers must be audited to Coles Additional Supplier Requirements.

Coles Direct Suppliers include businesses packing in Coles black crates or other Coles nominated packaging, as well as businesses trading directly with Coles.

Woolworths – It is the expectation of Woolworths that all approved suppliers (growers supplying Woolworths Direct Trade Partners) using Freshcare, will have obtained Certification to a minimum of Freshcare Version 3 by no later than 31st December 2010.

For some seasonal Freshcare growers, where harvest and therefore their annual audit is scheduled to take place after 31st December 2010 it will be impossible to achieve Certification to the 3rd Edition in the required timeframe. In this instance you should contact your customer (the Woolworths Direct Trade Partner) and provide details of the date of your 3rd Edition training and the scheduled date of your 3rd Edition audit.

Audit Timing

A Freshcare Food Safety and Quality (FS&Q) audit must take place during the harvest season when all aspects of the growing and packing operation can be demonstrated; the business does not have to actually be harvesting on the day of audit.

Any exceptions to the timing of Freshcare Food Safety and Quality audits must be approved by Freshcare.

Freshcare Environmental audits can take place at any time of the year when active farming operations are taking place; however most growers will schedule their environmental audit in conjunction with their FS&Q audit during their harvest season.

Auditor Rotation

From the 1st March 2011, Freshcare auditors will only be able to conduct a maximum of three annual audits of a Freshcare member business without a break. A minimum of a one year break is then required, prior to a second three year auditing period.

This requirement has been introduced at the request of key customer groups and to ensure a consistency of auditing in all regions. Exceptions to this rule will be considered on a case by case basis.

If you have had the same auditor to audit your Freshcare Program, you are likely to be audited by a different auditor after 1 March 2011 - for at least one audit.

Certification Bodies - Issues to Remember

If you change your Certification Body please advise Freshcare and also your previous Certification Body / Auditor so they can take you off their client list and avoid unnecessary calls to try and schedule an audit that is not required.

If you do not have a commercial crop due to adverse circumstances e.g. drought, flood etc and do not require a Freshcare Audit / Certification, please notify both Freshcare and your Certification Body. You will be placed in 'suspended' until your next audit.

If you need to cancel or reschedule a Freshcare Audit, please ensure you give your auditor plenty of notice. Cancelling at short notice may result in a fee being charged.

Members are reminded that non-payment of audit fees and Freshcare certification fees to your Freshcare Certification Body may result in a member being withdrawn from the Freshcare Program.

Freshcare Welcomes Members of the SaladGAP Program

SaladGAP (Salad Good Agricultural Practices) is an initiative of the Fresh Salad Producers' Forum and is supported by Horticulture Australia Limited. SaladGAP 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.

By collaborating on projects such as SaladGAP, the Salad Producers' Forum is developing a unified approach to essential pre-competitive issues, such as food safety. SaladGAP enables salad growers to demonstrate best practice to a range of key stakeholders, including salad processors and retailers. SaladGAP is designed to add on to existing food safety and quality systems, not to replace them. The program is externally audited every 12 months.

From 1 September 2010, administration of the SaladGAP Program will move to Freshcare Ltd. The Fresh Salad Producers' Forum will continue to provide the input into the technical improvements of the SaladGAP program and undertake research and development into issues such as validation of critical limits for high risk foods. The Fresh Salad Producers' Forum sees that administration of the Program by Freshcare will ensure that training of SaladGAP elements, questions and answers in relation to the Program and also audit reporting and Certification will be more efficiently managed through Freshcare. In effect Freshcare will be the "shop front" for SaladGAP.

For Freshcare members who need to also achieve Certification to SaladGAP, an additional subscription will be added to their existing Freshcare membership and combined Freshcare-SaladGAP audits can be scheduled. SaladGAP will simply be a 'bolt-on' program, like Freshcare Environmental. For growers who are certified to other programs, such as SQF1000, a separate SaladGAP membership will be established within the Freshcare database. All SaladGAP growers will be able to access information, including copies of Certificates, through their unique logon to the FreshcareOnLine system.

Version 2 of SaladGAP will be released shortly, following input from growers and auditors over the last 12 months.

In preparation for Freshcare taking over the administration of the SaladGAP Program, all businesses supplying salad vegetables to members of the Fresh Salad Producers' Forum will receive a letter outlining the new administration requirements and the changes under Version 2 of SaladGAP.

Watch out for the next edition of Freshcare News!

Issue 23 - Spring / Summer 2010, in December 2010.....including:

Technical Committee answers to all the tricky questions in implementing the 3rd Edition Code

Freshcare Environmental - 2nd Edition Code - what's new ?