

**A baseline survey of
knowledge, attitudes,
approaches and aspirations
regarding contamination
management**

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Instinct and Reason

Project Number: AH08011

AH08011

This report is published by Horticulture Australia Ltd to pass on information concerning horticultural research and development undertaken for the across horticulture industry.

The research contained in this report was funded by Horticulture Australia Ltd with the financial support of across horticulture funding.

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ISBN 0 7341 2030 3

Published and distributed by:

Horticulture Australia Ltd

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Know-how for Horticulture™



Baseline Survey of Knowledge, Attitudes,
Approaches and Aspirations regarding
Contamination Management

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March 2009 J922

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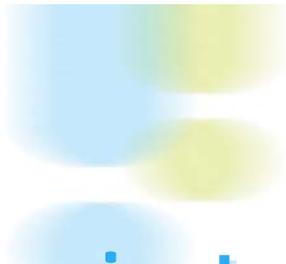
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presentation overview



Introduction	page: 3
sample profile	page: 6
executive summary	page: 8
main findings	page: 11
short term	page: 13
medium term	page: 16
re-establishment of a 'Fresh Produce Watch'	page: 25
conclusions	page: 28





introduction



study background



Horticulture in Australia is a \$7 billion industry, with exports of over \$700 million. It is the fastest growing industry in agriculture and has 17,273 enterprises.

It is extremely diverse and comprises fruit, vegetables, nuts, nursery, extractive crops, cut flowers and turf.

Horticulture Australia Limited (HAL) is a national research, development and marketing organisation that works in partnership with the horticulture sector to invest in programs that provide benefit to Australian horticulture industries.

Currently Australia's contamination management is thought to be among the best in the world, however, due to the changing nature of the global market, these policies, standards and regulations are constantly having to keep up with potential threats that could impact human health and domestic/foreign trade.



4

study objectives



The main objective of this study was to develop a body of quantitative knowledge about stakeholder and government agency attitudes, approaches and sought goals regarding physical, microbial and chemical contamination of fresh and processed horticultural products. Specifically, the project aims to quantify stakeholder and government agency understanding of contaminant issues.

Horticulture Australia Limited (HAL) wants to use the information gained from this study to provide baseline data as input to:

1. The horticulture protocol to manage incident responses and industry and consumer communication
2. Strategies for industry training and development
3. Understanding the gaps in information and the barriers to adoption of best management practices
4. Identifying possible research and development opportunities
5. Emphasising the importance of QA for producing safe food and creating a partnership approach between government and industry
6. Developing overall project and portfolio strategies
7. Establishing a benchmark to measure the effectiveness of ongoing industry efforts to improve food safety outcomes



5

project overview

Phase 1: Familiarisation and Strategy Check Session

Initial two hour session to recap on the current and historical issues, examine current strategies in place and any feedback on the successful elements, explore emerging issues and identify potential strategies for the future.



Phase 2: Literature Review

A review of current literature addressing contamination management issues.



Phase 3: Stakeholder Consultation (using in-depth interviews)

Ten face to face and telephone in-depth interviews with key stakeholders across a range of 'interest group categories'.

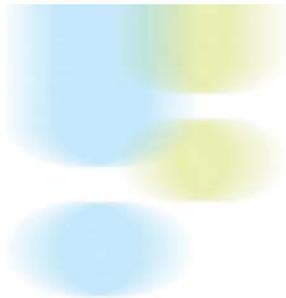


Phase 4: Online survey

A 30 minute online survey with stakeholders such as the State and Federal Government agencies, industry peak bodies, representatives of the wholesale and retail sectors, exporters, QA system owners, facilitators, audit bodies and relevant media/communication specialists.

phase 4 – online survey

- The online survey component was launched on the 6th October 2008
- Participants were invited to be involved via a broadcast email from HAL providing them with a link to the survey
- Several reminder emails were sent commencing on the 2nd of November 2008
- The survey was closed on the 18th of March 2009
- Despite great efforts by HAL to encourage people to participate, there were only 28 responses to the survey in total despite four reminders being sent to the available lists



sample profile



sample profile



Know-how for Horticulture™

	N	%
Food Grower	9	32
Food packer	0	0
Food service/catering	1	4
Food Wholesaler	0	0
Food Retailer	0	0
Food Exporter	1	4
QA Specialist	4	14
Food Regulator	1	4
Other (e.g. Crisis Plan Manager, IDO, HAL, food processor, IAC Secretariat, horticultural consultant)	12	43
Background in food safety and contamination management issues? (n=24)		
Yes	9	38
No	15	63

	N	%
Yes	4	17
Industry currently have a plan to manage a contamination incident (n=24)		
No	12	50
Don't know	6	25
Not Applicable	2	8
Length of time in the Horticultural industry		
< 12 months	0	0
1-2 years	0	0
2-3 years	1	4
4-6 years	2	7
7-9 years	1	4
10 years +	24	86





executive summary



executive summary



1 current knowledge across a range of issue areas (including incidents)

- The majority of those who responded to the survey believe they are knowledgeable regarding contamination management issues (61%)
- Chemical contamination of fresh and horticultural processed products (50%) and Microbial contamination of fresh and horticultural processed products (46%) are considered as the highest threats to horticultural food quality and safety
- 43% believe they are knowledgeable about correct protocols in the event of a major food contamination

2 attitudes to elements of the existing product integrity system

- 32% believe current quality assurance programs are insufficient and suggested improvements including a *centralised authority and centralised standards, a time efficient management system and assessment across the whole supply chain*
- Food Standards Australia and New Zealand (79%) and specific horticultural industry groups (75%) should play a central role in putting policies and procedures in place regarding contamination management (apart from Horticulture Australia)



11

executive summary



3 perceptions of resource strengths in tackling contaminant management

- Strengths of HAL's policies and procedures were the:
- Food safety programs
 - Residue testing
 - Communications/ working with the industry

4 perceptions of resource weaknesses in tackling contaminant management

- Weaknesses of HAL's policies and procedures were:
- The need to develop more structured/ detailed procedures
 - The discrepancy between the standards for domestic produce as opposed to imports
 - The need for more standardised protocols and procedures



12

5 perceptions of current gaps in tackling contaminant management

- 46% believe the greatest risk to be at the retail level and farm/growers/ primary production
- 36% reported that the horticultural industry is unprepared to deal with incident management due to a lack of *awareness of procedure/ no official strategies, poor training/ education* and *because HACCP programs are not compulsory*
- 25% believe they are unprepared to follow protocols if a major food contamination incident occurred

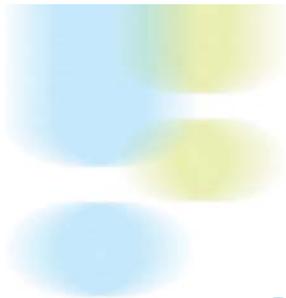
6 sought goals or aspirations for product integrity management

Short term priorities are:

- Introduction of consistent standards that are equal for imported and domestic produce
- Traceability systems put in place in all sectors
- Co-ordinated media management strategy and protocol

Medium/ long term priorities are:

- National agency responsible for all food safety
- Consistent standards that are equal for imported/domestic produce
- Greater education of primary producers

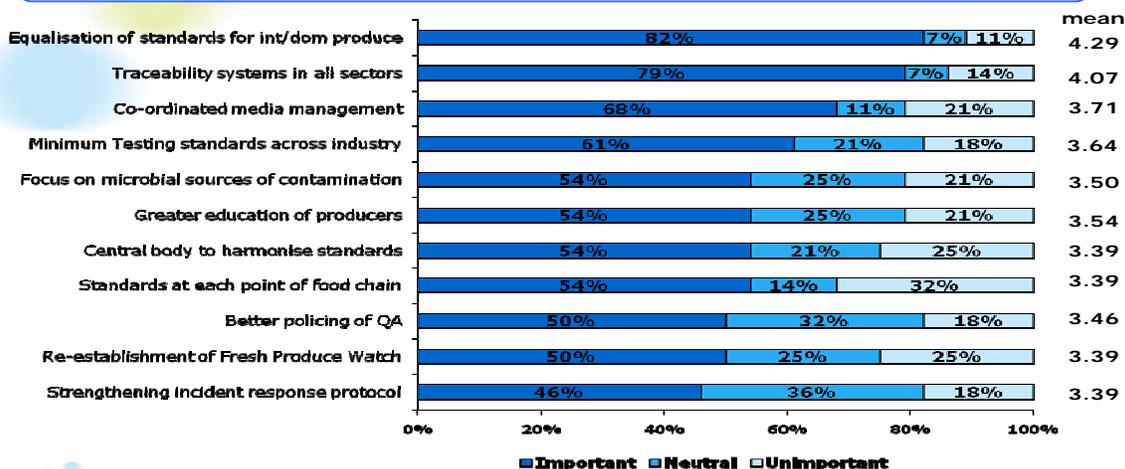


main findings



importance of contaminant issues – top 10

Equalisation of standards is seen as the most important contaminant management issue by those surveyed.



Base: Total sample respondents
Q1. Please indicate how important you consider the possible food contaminant issues to be for the horticulture industry/your sector?

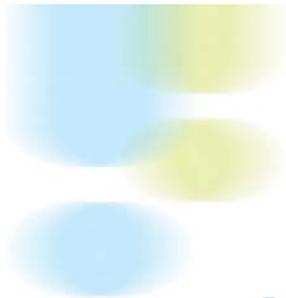
issues to focus on short/long term

Top 10 summary chart

rank	Short term priorities	Score*	Medium/ longer term priorities	Score*
1	Equalisation of standards for domestic and imported produce	38	Equalisation of standards for domestic and imported produce	19
2	Putting in place traceability systems in all industry sectors	20	Establishment of a single national agency responsible for all food safety	19
3	Reestablishment of a Fresh Produce Watch type program	18	More coordinated and 'single voice' media management	15
4	Central coordinating body to harmonise standards and 'plug gaps'	16	Minimum testing standards right across the industry	14
5	More focus on microbial sources of contamination	10	Central coordinating body to harmonise standards and 'plug gaps'	14
6	Strengthening of standards like Freshcare	8	Putting in place traceability systems in all industry sectors	14
7	Greater education of primary producers	8	Better policing of quality assurance standards	13
8	Minimum testing standards right across the industry	8	Greater education of primary producers	12
9	More testing at different points in the supply chain	7	More formulation of incident management response plans	8
10	Establishment of a single national agency responsible for all food safety	5	Strengthening of standards like Freshcare	7



Base: total sample
Q2 What issues are most important to address now?
Q3 Thinking now of the medium to longer term which of the above issues do you think are most important to address
Score- most important priority=3, second most important priority=2, third most important priority=1

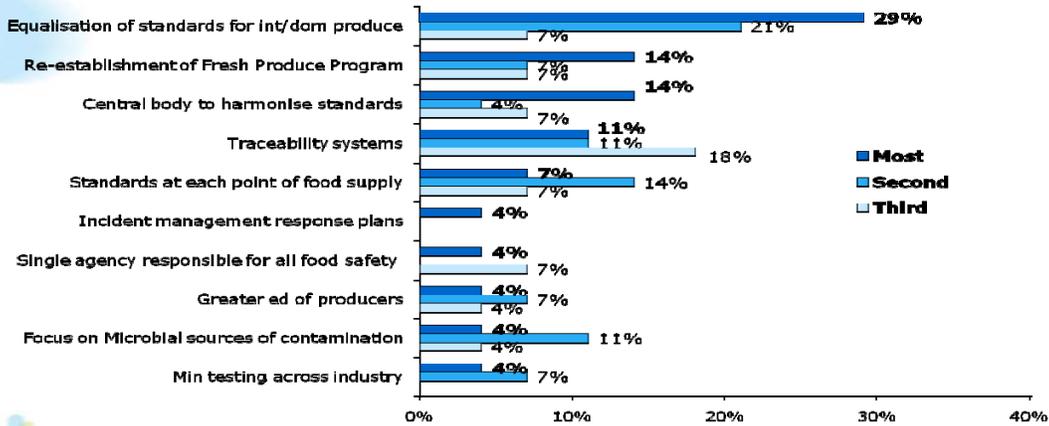


short term priorities



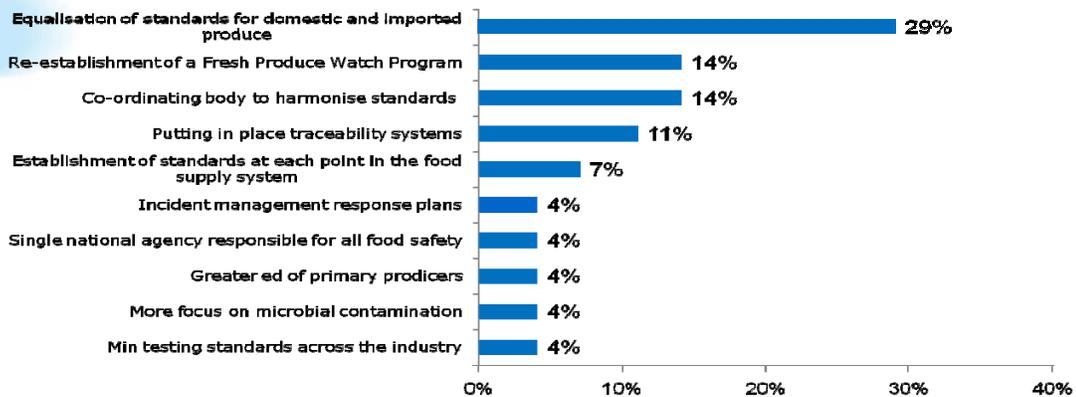
issues to focus on in short term- top 10

Equalisation of standards for domestic and imported product heads the issues of most important (and second most important) to address now or in the near future. Half those interviewed rated this most or second most important issue to act on now.



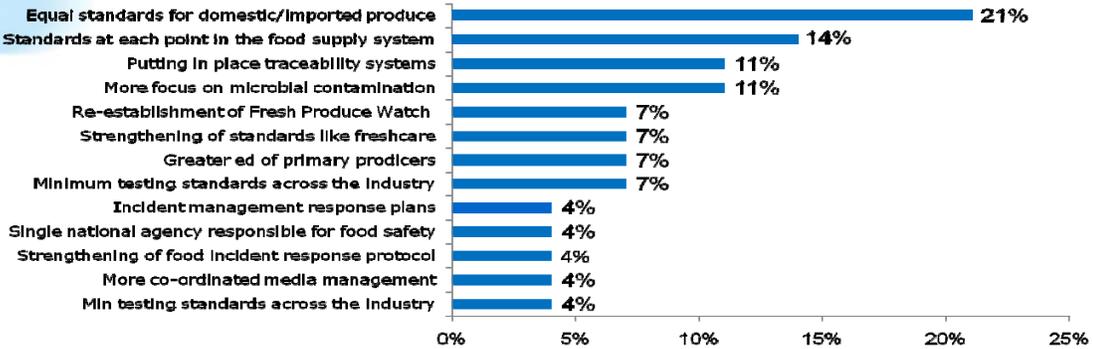
most important issue to address now- top 10

Equalisation of standards for domestic and imported product heads the issues of most important to address now or in the near future



second most important issue to address now

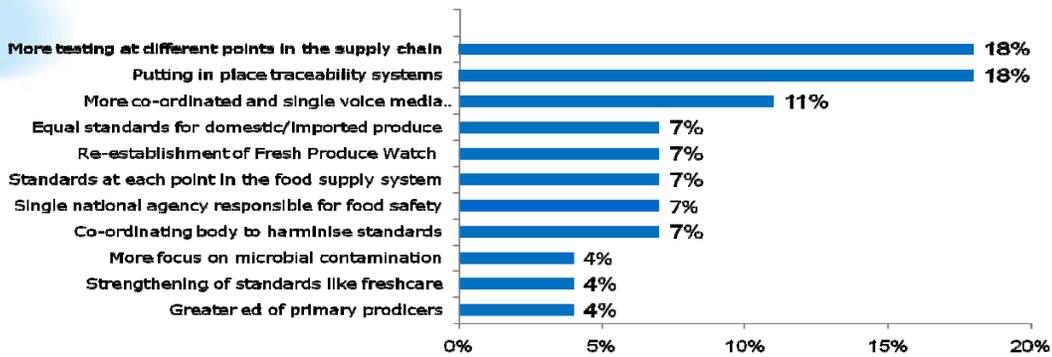
Equalisation of standards for domestic and imported product heads the issues of most important (and second most important) to address now or in the near future. Half those interviewed rated this most or second most important issue to act on now.



Base: Total sample
Q2. Which is the second most important to address now or in the near future?

third most important issue to address now

More testing at different points of the supply chain as well as implementing traceability systems are important issues to address now or in the near future



Base: Total sample
Q2. Which is the third most important to address now or in the near future?

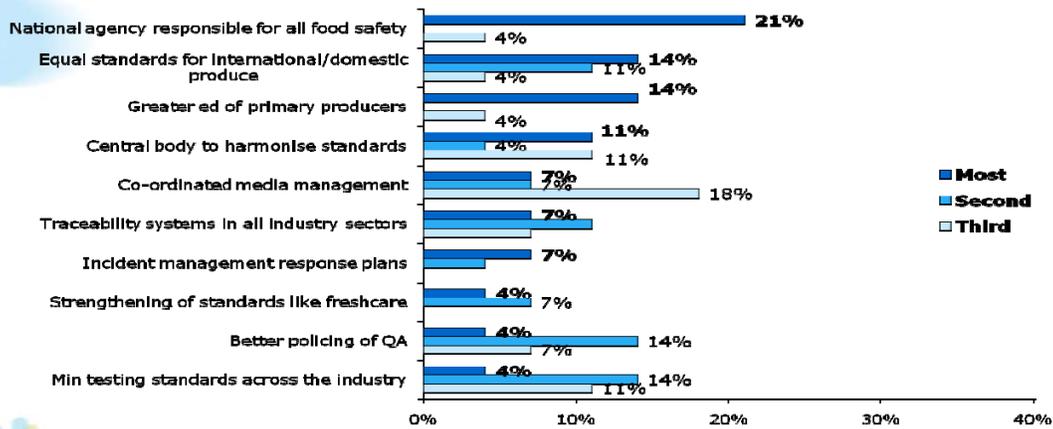


medium term priorities



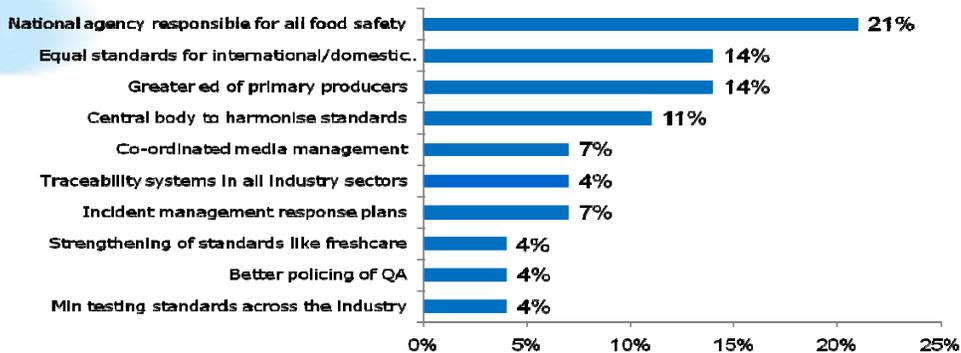
issues to focus for the longer term- top 10

National agency responsible for all food safety and Equalisation of standards head the issues of most important to address in the medium to long term.



most important issue for the longer term

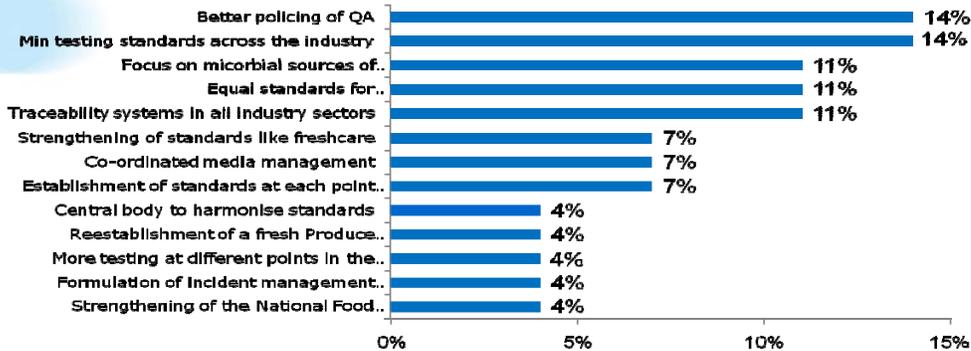
National agency responsible for all food safety heads the issues of most important to address in the medium to long term.



second most important issue for the longer term



Better policing of QA and Minimum testing standards across the industry are the second most important issues for the medium to longer term

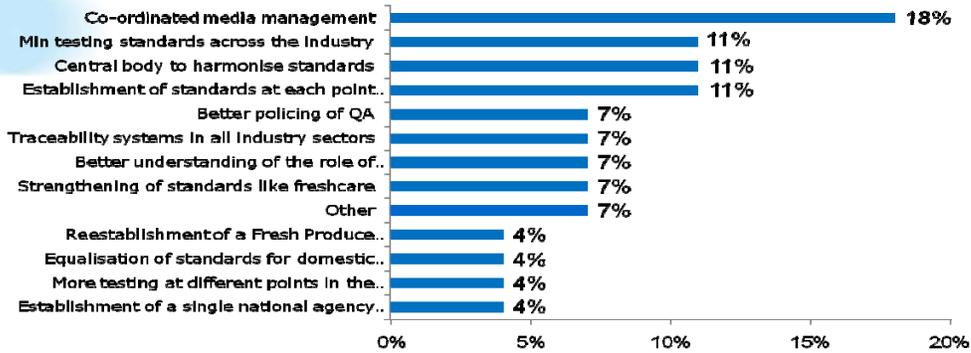


Base: Total sample
Q3. Thinking of the medium to longer term, which is the second important issue to address?

third most important issue for the longer term



Coordinated media management is an important issue to address in the medium to long term

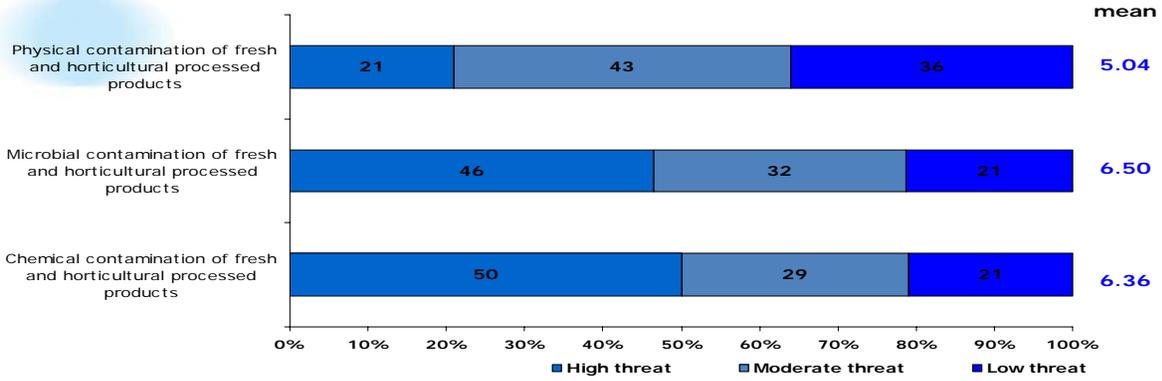


Base: Total sample
Q3. Thinking of the medium to longer term, which is the third important issue to address?

extent of threat to food quality and safety



Chemical contamination of fresh and horticultural processed products (50%) and Microbial contamination of fresh and horticultural processed products (46%) are considered as a high threat to horticultural food quality and safety



Base: Total Sample

Q6. If you were to assign a rating out of 10 in terms of the threat posed to horticultural food quality and safety, where 1 is the lowest threat rating and 10 is the highest threat rating, what rating would you give to the potential threat posed by the following

strength of HAL's policies and processes



"Food safety programs"

"Open and broad consultation mechanisms in place across industry and government"

"Good networking by HAL QA/ Food Safety Program with government, industry stakeholders and expert consultants to share intelligence/ information about produce contamination events and providing coordinated response."

"Strong foundation for industry with established programs e.g. Freshcare..."

"HAL's staff seem to have a very good understanding of the practical issues facing growers. In the event of an incursion or contamination threat I believe the response time and action taken was very quick. Industries need a central body to manage and coordinate actions in the event of an outbreak."

"Residue testing for Australian dried fruits"

"A dedicated Product Integrity Manager, support of industry during contamination but these policies or support mechanisms are not widely understood by PIBs"

"Communication to stakeholders e.g. via email. Support for IDO network to assist in communication and management of any issues."

"Working with Industries"

instinctive
Q7. What are the current strengths, if any, of Horticulture Australia's policies and processes regarding contamination management?
Note: 12 respondents (43%) either had no response, were not aware this was HAL's responsibility or did not know anything about HAL's policies and procedures

28

weaknesses of HAL's policies and processes



"Not moving fast enough"

"No formal structure/ policies/ processes within HAL, nor ongoing commitment to funding (i.e. ad hoc) to ensure effective, consistent and positive action in this crucial area of work for the industry."

"Removal of State and National testing programs. Data from testing of individual produce not recorded in a central data base which is then accessible to the relevant organisations."

"Those who don't comply with a standard have potential to cause problems for that sector and / or wider industry."

"There needs to be better defined parameters of contamination."

"Imported produce (fresh and processed) is not required to be produced under the same standards as Australian produce"

"Limited inspections of imported products"

"PIBs do not generally understand HAL policies re. contaminant management or support systems, staff expertise, processes and protocols available to industry for adoption. More training of staff and PIBs required in this area."

"Need to raise priority for industries to implement standard contamination management protocols. Run as a cross-industry activity and provide funds for industries to develop industry-specific protocols and procedures."

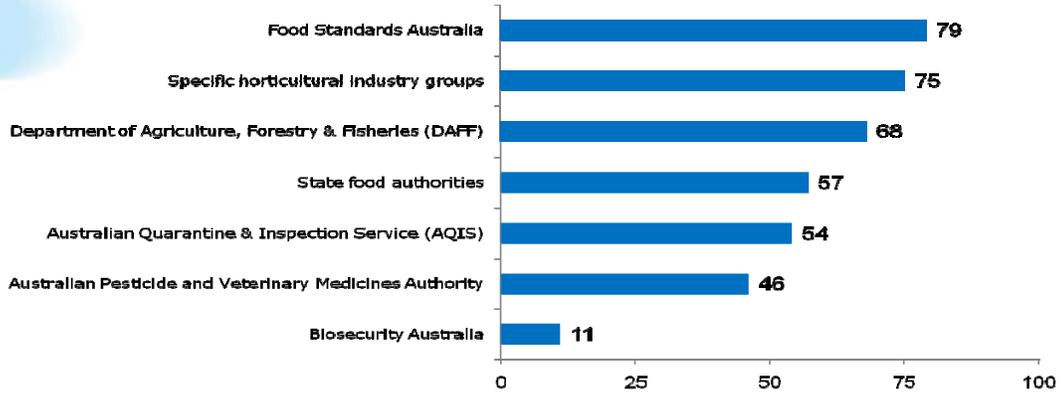
instinctive
Q8. And what are the current weaknesses, if any, of Horticulture Australia's policies and processes regarding contamination management?
Note: 12 respondents (43%) either had no response, were not aware this was HAL's responsibility or did not know anything about HAL's policies and procedures

29

perceptions of policy and procedure making



Food standards Australia and New Zealand (79%) and specific horticultural industry groups (75%) are considered to be the agencies that play the central role in developing policies and procedures regarding contamination management (apart from Horticulture Australia)



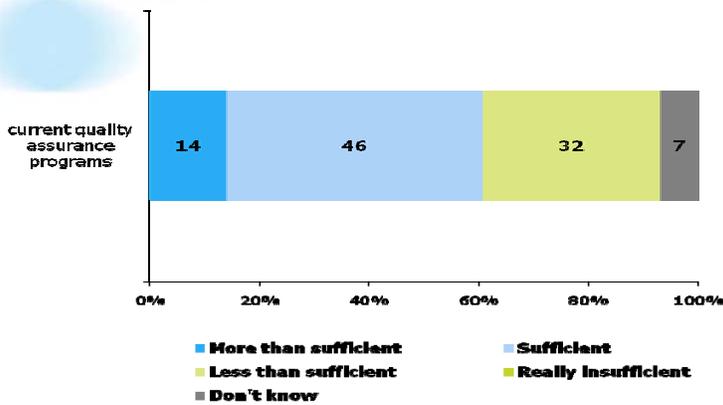
Base: Total Sample

Q9. Aside from Horticulture Australia, which of the following stakeholders do you believe have a central role to play in putting in place policies and procedures regarding contamination management for the horticulture industry? Please identify who you consider the key four stakeholders to be...

perceptions of current quality assurance programs



60% reported that current quality assurance programs to maintain quality and food safety in the horticulture industry are sufficient



Suggestions to improve current quality assurance	n=
Centralised authority and centralised standards	5
Simple/ time efficient	4
Assessment across whole supply chain	4
Education/ awareness	3
Consistency of auditing	2
Make HACCP based programs compulsory	1
Increased communication	1
Freshest for micro and water in higher numbers	1
Same requirements placed on imported produce	1



Base: Total Sample

Q10. Do you consider that the current quality assurance programs in place to maintain quality and food safety in the horticulture industry are
Q11. Do you have any suggestions as to how quality assurance for the horticulture industry could be improved?

what part of the food supply chain poses the greatest risk?



46% believe the greatest risk to be at the retail level followed by the farm/growers (25%)

Thinking about the horticultural food supply chain, what part of the food chain do you consider there is greatest risk for a food contamination incident to occur	%	Description of the risk...	%
Retail	46	Microbial	29
Farm/growers/ primary production	46	Chemical	18
Overseas	7	Physical	14
Processing	7	Overseas	4
Home	4	Water management (incl livestock near water)	7
Transportation	4	All types of contamination at all points of supply chain	4
All stages	4	Lack of training	7
		Risks are hard to identify	4
		Lack of information for consumers	4

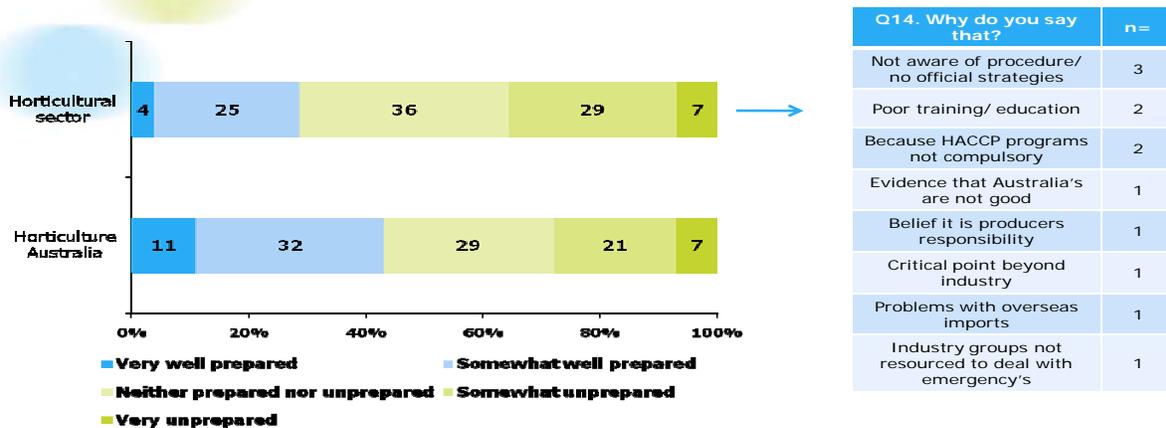


32

capacity to deal with risks in the food supply chain



29% and 43% reported that the horticultural industry and Horticulture Australia are prepared to deal with incident management respectively



Base: Total Sample

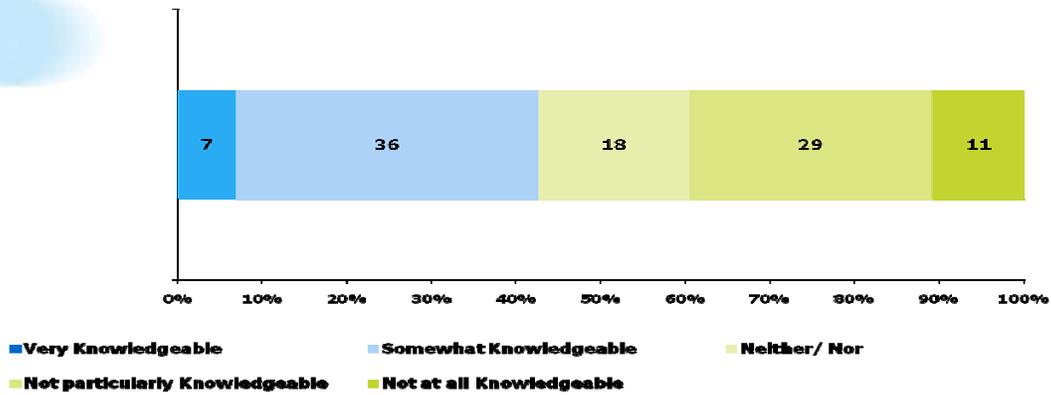
Q13. How prepared do you believe that the horticulture industry is in general to deal with this kind of risk.

Q14. Why do you say that?

Q15. How prepared do you believe that Horticulture Australia is to deal with this kind of risk. Would you say that Horticulture Australia is...?

knowledge of protocols in the event of food contamination

Less than half (43%) believe they are knowledgeable about the correct protocols in the event of a major food contamination incident

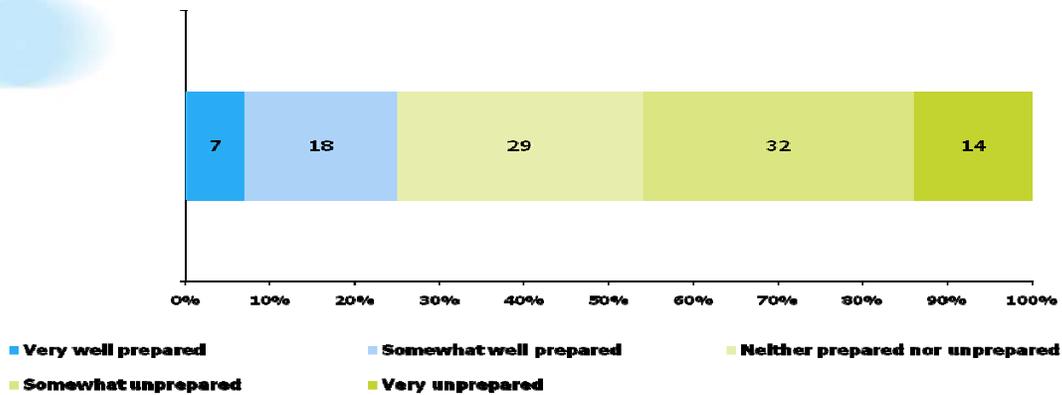


Base: Total Sample

Q16. How knowledgeable do you consider yourself to be about the correct protocols (i.e. procedures) to follow in the event of a major food contamination incident that requires you to respond.

ability to manage contamination incidents

Only 25% believe they are prepared to follow protocols if a major food contamination incident occurred



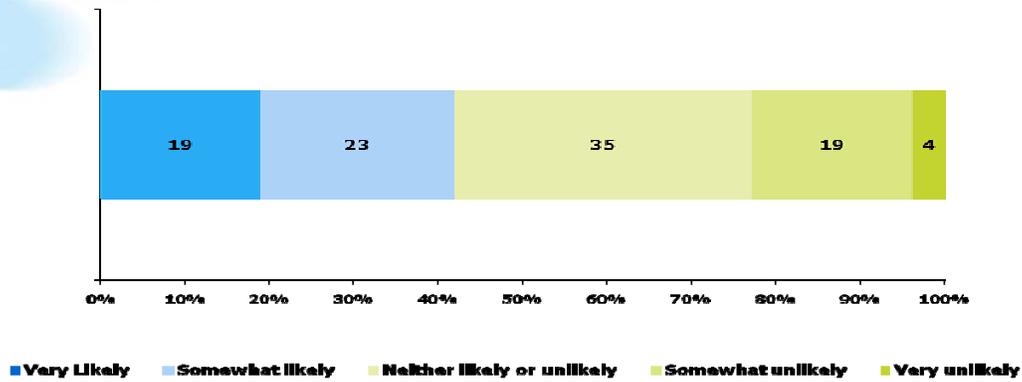
Base: Total sample

Q17. If such an event were to occur, to what extent would you say that you know the actual correct protocols (i.e. procedures) to follow to help manage the incident. Would you say you are...

perceptions of future contamination incidents



42% reported that they believe the horticultural industry will experience a major food contamination incident in the near future



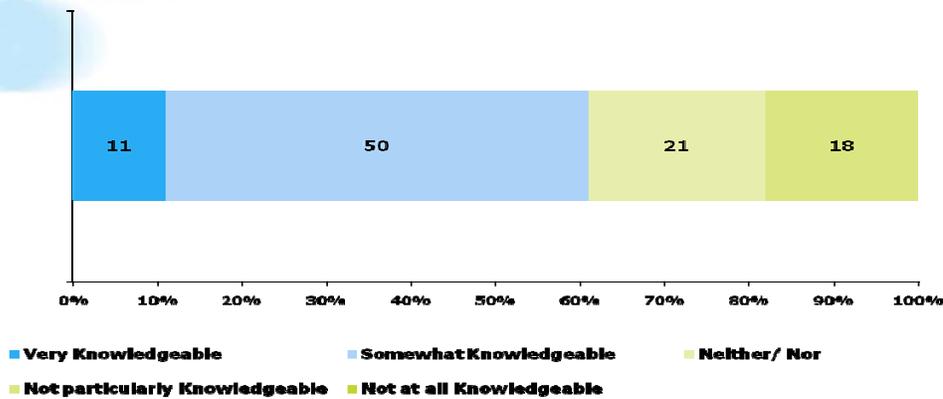
Base: Total Sample

Q19. How likely or unlikely do you consider it to be that the horticultural industry will experience a major food contamination incident in the near future (say the next 12-24 months)

personal knowledge of contamination management



Majority (61%) believe they are knowledgeable about contamination management issues



Base: Total Sample

Q23. Overall how knowledgeable do you consider yourself to be about contamination management issues?

re-establishment of fresh produce watch

re-establishment of 'Fresh Produce Watch'



There is support for the re-establishment of a 'Fresh Produce Watch'

In the absence of national standards, strict enforcement and appropriate import policies...

- **Fresh Produce Watch provides comfort to growers** - *"is proactive and provides comfort...it tells growers what to expect at pre-harvest and harvest and what is tested...and the growers get pinged...a kick in the backside and know where they have gone wrong and that they have to do something."*
- **Can alleviate confusion** *"Things around residue monitoring have tightened with over 1000 tests with greater sensitivity like levels of less than 2% MRL but there needs to be more resources and greater coordination...as there so many different regimes."*
- **Education – source of knowledge** *"The education for Fresh Produce Watch and residue monitoring has been like a light under a bucket...like there has been virtually no education or it just doesn't get out there to the growers...there should be some sort of recording of training and ongoing qualifications system like there is with doctors and teachers and professionals like that...where people get points for attending national seminars, and training on food safety, chemical certification... There needs to be more commitment and incentive within the industry...I recently attended the horticultural industry national conference in New Zealand, where there were 750 attendees of which 350 were growers, representing a strong level of unity and readiness to seek information and develop knowledge."*



39

re-establishment of 'Fresh Produce Watch' (cont)



There is support for the re-establishment of a 'Fresh Produce Watch'

In the absence of national standards, strict enforcement and appropriate import policies...

- **Certification is essential – needs supervision and a known voice speaking up about things that matter** *"I think people should be required to be registered and certified to buy and sell produce...in terms of agricultural chemicals, water use, production standards...it should be required that there be a registration on the box of the product and if it is not there it can't be sold or purchased."*
- **Promotion of certification – a consistent voice** *"Certification and quality assurance is not promoted and there are too many schemes with lower level standards allowing the same access as producers meeting higher level standards...for example, someone only meeting ISO9001 through a third party has the same market access as someone meeting ISO 1000 [respondent actually means SQF1000]. There is no coordinating third party against which this is managed. It is difficult with some fringe industries but we need food certification and standards to be coordinated."*
- **Fresh Produce Watch is a start but needs ongoing and persistent effort** - *"Fresh produce watch is doing okay. It is a start. It can't be done as a one off."*
- **Small producers all doing their own thing is a recipe for disaster** *"This is especially in horticulture...where there are a lot of small producers supplying into one exporter. The different small suppliers are not educated on the risks and contamination management issues, etc."*



40

re-establishment of 'Fresh Produce Watch' (cont)



There is support for the re-establishment of a 'Fresh Produce Watch'

In the absence of national standards, strict enforcement and appropriate import policies...

- **Education of Producers and Exporters** *"It's also an education issue for producers and exporters. The meat industry has learnt from past incidents with the closing of markets and loss of \$60-100 million in incidents."*
- **Prevention is better than cure – Without Fresh Produce Watch the industry is basically just waiting for something to go wrong** *"Prevention is better than cure...In the meat industry they can't sell without the NVD vendor disk/tag and there is the LPA NVD as part of the Livestock Production Assurance. There should be something similar in Horticulture to cover contaminant management as part of the quality assurance system."*
- **Residue monitoring is all over the place – it needs consistency** . *"There is some certification and QA in sectors of the horticulture industry, but inconsistent and not enough is done in some sectors. There is some residue monitoring surveying by some horticulture industries; some done by States but it varies between them; and then some done nationally by DAFF compliance sections. It is all over the place."*
- *"For example, Victoria does a fair bit of testing but we don't know what testing is occurring and what reporting is taking place...this should be readily available and transparent...no one can tell you all the testing that is happening. Whereas with the meat, dairy and grains industries there are official central testing programs with the NRS. This is important as it is then something you can hang your hat from when problems arise...you can demonstrate the controls and testing program and also be able to prove, for example, that it is a one off."*



41

re-establishment of 'Fresh Produce Watch' (cont)

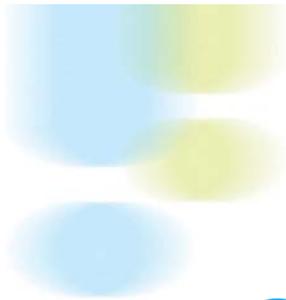


There is support for the re-establishment of a 'Fresh Produce Watch' but it needs to...

- **Continue putting the threat of a contamination scare on the agenda**
 - *This is an issue all too easy to push to the back of our minds...it's a hard thing to do and well... it's not actually happening today [but it is inevitable that one day it will] and there are plenty of today issues to deal with"*
- **Continue to be a voice regarding real threats**
- **By encouraging, promoting and undertaking residue testing**
- **By working towards consistent residue testing**
- **By developing skills and promoting protocols for media management in the case of a contaminant issue**
- **By providing some comfort to growers that someone is looking after/working on this important matter**
- **Educating grower, exporters and major producers of the risks of contaminant issues**



42



conclusions



conclusions and recommendations



Know-how for Horticulture™

key insight

The majority of those who responded to the survey believe they are knowledgeable about contamination management issues however less than half actually know the correct protocols in the event of a major food contamination. There is a disconnect regarding correct procedures and protocols

recommendations

As the disconnect is mainly due to the absence of a uniformed national authority with standardised protocols and procedures the establishment of such an authority is needed to provide clarity when an incident occurs. A simple/ time efficient management system as well as a method of assessment across the whole supply chain is essential

A third of those who participated in the survey believe the horticultural industry is unprepared to manage a contaminant incident. Uncertainty exists regarding procedures, protocols, media management, residue practices, how to handle the politics and many other aspects that would occur in such a situation

Uncertainty needs to be eradicated by having a more coordinated national approach, standardised training programs, standardised QA, greater education, wider residue testing and ensuring the issues remains on the agenda for the horticulture industry

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44

conclusions and recommendations



Know-how for Horticulture™

key insight

Essentially the risk of a food contamination incident, probably from overseas, is a source of great and ever present concern for many
A domestically driven incident remains a distinct possibility as well
Action on all these issues is desired in the ideal world

recommendations

Respondents indicated that the priorities for the short term are to ...

- equalise standards for imported and domestic produce,
- introduce traceability systems in all sectors and
- Establish a system for coordinated media management (in effect a new version of Fresh Produce Watch)

Longer term priorities are to...

- Establish a national agency responsible for all food safety,
- equalise standards for imported and domestic produce and
- Provide greater education of primary producers



45