The Senate

Rural and Regional Affairs and Transport References Committee

Implications of the restriction on the use of fenthion on Australia's horticultural industry

July 2014

ISBN 978-1-76010-014-8

This document was prepared by the Senate Standing Committee on Rural and Regional Affairs and Transport and printed by the Senate Printing Unit, Department of the Senate, Parliament House, Canberra.

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Abbreviations

Agvet/agvet	Agricultural and veterinary chemicals
APAL	Apple and Pear Australia Limited
APVMA	Australian Pesticides and Veterinary Medicines Authority
AWM	Area Wide Management
CA SA	Citrus Australia (SA)
CFS	Country Fire Service
COAG	Council of Australian Governments
DA	(Commonwealth) Department of Agriculture
DAFWA	Department of Agriculture and Food Western Australia
DOIG	Donnybrook Orchard Improvement Group
EFSA	European Food Safety Authority
FSANZ	Food Standards Australia New Zealand
GAP	Good Agricultural Practice
HAL	Horticulture Australia Limited
HCSA	Horticulture Coalition of South Australia
HOIG	Hills Orchard Improvement Group
IGA	Intergovernmental agreement
LCA	Low Chill Australia
Medfly	Mediterranean fruit fly
MRL	Maximum Residues Limits
NRA	National Registration Authority
NFFS	National Fruit Fly Strategy
NRS	National Registration Scheme for Agricultural and Veterinary

	Chemicals
OCS	Office of Chemical Safety
OP	Organophosphate
PIRSA	Department of Primary Industries and Regions South Australia
PHA	Plant Health Australia
QFF	Queensland fruit fly
Queensland DAFF	Queensland Department of Agriculture, Fisheries and Forestry
RCP	Restricted Chemical Product
SAFFGA	South Australian Fresh Fruit Growers Association
SIT	Sterile Insect Technology
the Code	*Australia New Zealand Food Standards Code*
the Forum	COAG Legislative and Governance Forum on Food Regulation
WHP	withholding period

List of recommendations

Recommendation 1

2.65 The committee recommends that all relevant Commonwealth, state and territory agencies be encouraged to cooperate to better convey their respective roles and responsibilities in relation to the regulation of agvet chemicals to stakeholders.

Recommendation 2

2.66 The committee recommends that all relevant Commonwealth, state and territory agencies be encouraged to undertake a collaborative communications program which clearly and simply communicates their respective roles and responsibilities in relation to the regulation of agvet chemicals to stakeholders.

Recommendation 3

2.67 The committee recommends that the Commonwealth, state and territory governments review arrangements, legislation and regulations relating to agvet chemicals, with the aim of simplifying and streamlining, but not weakening, the regulation of agvet chemicals, and providing greater certainty and transparency to stakeholders.

Recommendation 4

4.94 The committee recommends that the maximum twelve month transition period allowed under the *Agricultural and Veterinary Chemicals Code Act 1994* be initiated by the APVMA, that fenthion be permitted for sale during the first half of that period, and that the APVMA allow fenthion to be used during the full transition period, subject to appropriate 'conditions of use'.

Recommendation 5

4.102 The committee recommends that state and territory governments consider developing legislation which enables relevant authorities to compel landowners to manage their properties to an acceptable standard that does not pose a biosecurity risk to neighbouring properties and surrounding regions.

Recommendation 6

4.103 The committee recommends that, when undertaking its review of the National Fruit Fly Strategy, the Advisory Committee take into consideration the following important issues:

- **abandoned orchards;**
- **encouraging community involvement in fruit fly management;**
- **ways of providing funding for local government initiatives (in relation to fruit fly management); and**
- **the value of conducting research into minor use programs.**

Recommendation 7

4.104 The committee recommends that the findings of the National Fruit Fly Strategy Advisory Committee be considered by government in a timely fashion, to allow the implementation phase to go ahead without delay.

Recommendation 8

4.105 The committee recommends that, following the National Fruit Fly Strategy Advisory Committee's review, the Commonwealth Government provide adequate ongoing funding – and seek matching funds from states, territories and industry – to promote an immediate implementation of the Strategy.

Chapter 1

Introduction and background

Conduct of inquiry

1.1 On 12 December 2013, the Senate referred the following matter to the Rural and Regional Affairs and Transport References Committee for inquiry and report by 25 June 2014:

> The implications of the restriction on the use of Fenthion on Australia's horticultural industry, including:
>
> (a) the roles and responsibilities of relevant departments and agencies of Commonwealth, state and territory governments in relation to the regulation of pesticides and veterinary chemicals;
>
> (b) the short- and long-term impact of the decision on stakeholders;
>
> (c) the effectiveness and sustainability of chemicals other than Fenthion to manage fruit fly;
>
> (d) transition arrangements following the restriction on the use of Fenthion, including Area Wide Management; and
>
> (e) any related matters.

1.2 The inquiry was advertised in *The Australian* on 5 February 2014. The committee also wrote to key stakeholder groups, relevant government departments, organisations and individuals to invite submissions.

1.3 The committee received 30 submissions which are listed at Appendix 1. The submissions are also published on the committee's website.

1.4 The committee held two public hearings – in Perth on 3 February 2014 and in Loxton on 16 April 2014. The committee took evidence from a number stakeholders, including industry bodies, state government representatives, agricultural businesses, local government bodies and individual growers. A list of witnesses who appeared at the hearings is at Appendix 2.

1.5 Prior to the Perth hearing, on 3 February 2014, the committee undertook a number of site visits in the Perth Hills including Roleystone, Karragullen, Pickering Brook and Carmel. The committee visited four orchards, and spoke to a number of growers, some of whom were using fenthion and others who were trialling the use of other chemicals and alternative methods to control fruit fly.

Structure of the report

1.6 Chapter 2 outlines the roles and responsibilities of those departments and agencies (both Commonwealth and state) that play a part in the regulation of pesticides and veterinary chemicals in Australia.

1.7 Chapter 3 describes the current uses for fenthion and outlines the review process undertaken by the APVMA. Chapter 3 also outlines the evidence provided to the committee by stakeholders on the potential impacts of restricting (or banning) the use of fenthion, both on individual businesses and the horticultural industry as a whole.

1.8 Chapter 4 considers some of the possible alternatives to fenthion, and outlines stakeholders' views regarding their effectiveness and sustainability. The chapter also outlines possible transition arrangements to be put in place following the restriction (or complete ban) on the use of fenthion.

1.9 In addition to stakeholder's suggestions for possible transition arrangements, Chapter 4 also outlines stakeholders' views regarding the use of Area Wide Management (AWM) techniques, Sterile Insect Technology (SIT) and the implementation of the National Fruit Fly Strategy (NFFS).

Acknowledgements

1.10 The committee acknowledges the many individuals and organisations that made contributions to the inquiry, both through providing submissions and appearing as witnesses to the inquiry.

Note on references

1.11 References in this report are to individual submissions as received by the committee. The *Hansard* transcripts of the committee's hearings are available on the Parliament's website at www.aph.gov.au. References to the *Hansard* throughout the report are to the proof transcript. Page numbers may vary between the proof and the official transcript.

Chapter 2

The regulation of pesticides and veterinary chemicals – roles and responsibilities of Commonwealth and state departments and agencies

2.1 As part of its inquiry, the committee was required to identify the roles and responsibilities of relevant departments and agencies of Commonwealth, state and territory governments in relation to the regulation of pesticides and veterinary chemicals.

2.2 This chapter provides an outline of the various Commonwealth and state government departments and agencies that play a part in the regulation of pesticides and veterinary chemicals in Australia. The chapter also examines stakeholders' views in relation to the regulatory system.

Intergovernmental agreement – National Registration Scheme for Agricultural and Veterinary Chemicals

2.3 The constitutional responsibility for the regulation of agricultural and veterinary (agvet) chemicals resides with Australia's state and territory governments. However, in 1995, the Commonwealth and the state and territory governments signed an intergovernmental agreement (IGA) to establish a National Registration Scheme for Agricultural and Veterinary Chemicals (NRS).[1] Under the 1995 IGA, the states and the Northern Territory handed powers to the Commonwealth under their legislation for regulating agvet chemicals up to the point of sale. The states and territories retained responsibility for controlling the use of relevant chemicals.

2.4 An updated IGA was signed by the Commonwealth, states and territories in 2013. The 2013 IGA extended the agreement to include the Australian Capital Territory and incorporated further policy principles for the harmonisation of agvet chemical regulations.[2]

2.5 Across the Commonwealth, states and territories, there are a number of government departments and agencies that share responsibility, or have a specific role to play in the regulation of agvet chemicals.

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1 Department of Agriculture, *Submission 15,* p. 10.

2 Department of Agriculture, *Submission 15,* p. 10.

Commonwealth departments and agencies

Australian Pesticides and Veterinary Medicines Authority

2.6 Under the IGA, the Australian Pesticides and Veterinary Medicines Authority (APVMA) is recognised as the independent Commonwealth statutory authority responsible for the registration of agvet chemicals – 'allowing use in Australia'.[3]

2.7 The APVMA was established under the *Agricultural and Veterinary Chemicals (Administration) Act 1992* (Administration Act). The Administration Act sets out the role of the APVMA (for undertaking the responsibilities conferred on it by the states and territories) under the NRS. The APVMA's functions and powers are conferred by:

- the Administration Act;
- the *Agricultural and Veterinary Chemicals Code Act 1994* (Agvet Code Act); and
- the *Agricultural and Veterinary Chemicals Code* (Agvet Code).[4]

2.8 The APVMA submitted that its three main functions – and those which are of direct relevance to the decisions made in relation to fenthion – are: registrations of existing products, consideration of applications for permits; and chemical review. [5]

Registration

2.9 It is a requirement that all new agvet chemicals be registered by the APVMA before they can be supplied, distributed or sold anywhere in Australia. Active constituents (the substance/s in an agvet chemical product primarily responsible for its biological or other effects) must also be approved by the APVMA, either before, or at the same time as the primary product is registered.

2.10 In applying for registration, the manufacturer or applicant must demonstrate that, if used according to proposed label instructions, the product will:

- be safe for humans and non-target species;
- not pose unacceptable risks to the environment or to trade with other nations; and
- be effective for the uses described on the label.

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3 Department of Agriculture, *Submission 15*, p. 1.

4 Australian Pesticides and Veterinary Medicines Authority, *Submission 23*, p. 1.

5 This section of the report is based on information provided in Australian Pesticides and Veterinary Medicines Authority, *Submission 23*, pp 2-8.

2.11 Once all relevant assessments[6] are completed under s14 of the Agvet Code, the APVMA must only grant an application if it is satisfied that use of the product (in accordance with the label instructions):

- would not be an undue hazard to the safety of people exposed to it during its handling or people using anything containing its residues;
- would not be likely to have an effect that is harmful to human beings;
- would not be likely to have an unintended effect that is harmful to plants, animals or things, or to the environment; and
- would not unduly prejudice trade or commerce between Australia and places outside Australia.

Permits

2.12 Chemicals must be used in accordance with instructions on the label, except where 'off-label' use is allowed under state and territory legislation, or there is a permit in place from the APVMA.

2.13 In most states and territories, registered products must only be used for the purposes specified on the label.[7] The APVMA has the power to consider applications for permits that allow for the legal use of chemicals in ways different to the uses set out on the product label. In certain circumstances, the limited use of an unregistered chemical may also be allowed by permit.

2.14 The types of permits that may be considered by the APVMA are for one of the following five purposes:

- **Minor use** – applies to situations usually involving low acreage crops, small portions of high acreage crops, or animal species which are not covered by the product label.
- **Emergency use** – for situations such as outbreaks of exotic pests or diseases.
- **Research** – allows for chemical products to be used in research trials of varying size for scientific purposes.
- **Export** – allows for the holder to possess and supply an unregistered chemical product or an unapproved active constituent for export purposes only.

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6 The APVMA conducts a significant proportion of the assessment in-house, but advised that it does seek expert scientific input from external sources such as the Office of Chemical Safety, the Department of Health (for toxicology and occupational health and safety issues), and the Department of the Environment (for environmental assessments).

7 The APVMA advised that, in practice, situations often arise where chemicals are needed for a use not specified on the label – this type of use is often termed 'off label' use.

- **Miscellaneous** – generally issued to allow the supply of a particular batch or batches of registered product where the product does not comply with the product specifications, but may be issued for any purpose that would nullify certain offences under sections of the Agvet Code.

Chemical review

2.15 The APVMA advised that the Chemical Review Program was established in the 1990's as a 'post-market mechanism to re-evaluate "older" pesticide products that had been authorised under the previous state-based registration arrangements'.[8]

2.16 Under the Agvet Code, the APVMA has the power to conduct reviews of registered chemicals. These powers include the authority to reconsider the registration of products and approvals of active ingredients and labels, and to require registrants to provide information.

2.17 The APVMA noted that a review may be initiated when new research or evidence has raised concerns about the use or safety of a particular chemical or product (when used according to label instructions). Reviews may focus on one or more areas of concern, including environmental safety, worker safety, public health, residues and trade, or (less commonly), product efficacy.

2.18 The risk assessment process conducted in reviewing a chemical product follows the same principles and legislative criteria as that for registration of all chemical products.[9] Part of the scientific process involves the setting of human health and/or environmental standards for safe levels of exposure to the chemical. Use of the chemical can only proceed if the level of exposure is below these standards, to ensure – with a high degree of certainty – the safety of all members of the public, workers and the environment.

2.19 The APVMA indicated that the length of time taken to conduct a review varies on a case-by-case basis. The time taken can range from a few months for a basic label review, through to many years for a more technically-complex review. Some of the more complex reviews may involve the reconsideration of several agvet chemical products with a number of use patterns and involve multiple assessments.

2.20 The committee was told that, if the APVMA has sufficient reason to be concerned about the risks of a particular product, 'it may (and often does) place restrictions on or suspend the use of product labels in question while the review is conducted'.[10]

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8 Australian Pesticides and Veterinary Medicines Authority, *Submission 23*, p. 4.

9 An outline of the APVMA's current Chemical Review Process is provided at Appendix 3.

10 Australian Pesticides and Veterinary Medicines Authority, *Submission 23*, p. 5.

2.21 The APVMA noted that the review process 'generally involves extensive consultation with the public and industry'[11] and that submissions from growers, householders, local government authorities, pest controllers and other chemical users help construct a picture of how the chemical is currently used. The APVMA also uses the consultation period to obtain supplementary information to assist with refining its risk assessment.

2.22 The public comment period, immediately prior to the APVMA making its final decision (about the future use of chemical products), provides an additional opportunity for individuals and organisations to provide feedback.

2.23 Under Section 34 of the Agvet Code Act, on completion of the review process, the APVMA can only allow continued use of a registered product (or an active constituent approval) if satisfied that it:

- would not be an undue hazard to the safety of people exposed to it during its handling or people using anything containing its residues;
- would not be likely to have an effect that is harmful to human beings;
- would not be likely to have an unintended effect that is harmful to plants, animals or things or to the environment;
- would not unduly prejudice trade or commerce between Australia and places outside Australia; and
- would be effective according to criteria determined by the APVMA.

2.24 Depending on a review's findings, chemicals (and the products containing them) might be:

- confirmed as safe and appropriate for registered use;
- restricted in access and use;
- reformulated;
- required to carry amended labels with new directions for use and/or safety directions; or
- suspended, cancelled or withdrawn from the market.

2.25 In addition to establishing Maximum Residue Levels (in conjunction with Food Standards Australia and New Zealand (FSANZ)), the APVMA also has the power to approve withholding periods (WHP)[12] and provide users with the

11 Australian Pesticides and Veterinary Medicines Authority, *Submission 23*, p. 6.

12 Withholding periods (WHP) are the time that must elapse after the last application and the harvesting or consumption of treated plants.

information they require to ensure that residues in their treated produce will not exceed the Maximum Residue Limit (MRL).[13]

2.26 Importantly, the APVMA's submission stressed that, as the regulator, it does not get involved with 'activities relating to the identification and meeting of market opportunities, research or data generation, and industry adjustment activities'.[14]

Commonwealth Department of Agriculture

2.27 The Department of Agriculture (DA) described its principal role in relation to agvet chemicals as the general oversight of the Government's agvet chemical policy. DA provides advice to the Minister for Agriculture on the regulation of agvet chemicals and on strategic aspects of chemical management in Australia. DA also implements government policy by developing amendments to the agvet chemical legislation and working with the states and territories as part of the NRS.[15]

2.28 DA noted that it will continue to be involved in the oversight of recent changes to the APVMA's legislation – which was amended in response to concerns about the process and the timeframes for reviews. The committee was told that from 1 July 2014, the department will oversee the following changes to the way in which reviews are conducted, including:

- streamlined reviews which clearly set out the matters to be addressed;
- the publication of a workplan for proposed reviews;
- improved transparency and stakeholder involvement (by providing opportunities for stakeholder submissions at defined points in the process);
- the release of draft review decisions for stakeholder input;
- the completion of reviews within statutory timeframes; and
- the provision of longer data protection periods to encourage stakeholders to supply data (to assist reviews).[16]

2.29 Under the Australian Constitution and the *Quarantine Act 1908*, the Commonwealth is responsible for matters relating to the Australian border, including development and enforcement of quarantine measures for imported goods and for activities undertaken on Commonwealth lands.

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13 Maximum Residue Limits (MRL) is the highest concentration of a residue of an agvet chemical that should occur in a food following use of a product. Department of Agriculture, *Submission 15*, p. 12.

14 Australian Pesticides and Veterinary Medicines Authority, *Submission 23*, p. 2.

15 Department of Agriculture, *Submission 15*, p. 11.

16 Department of Agriculture, *Submission 15*, p. 11.

2.30 DA indicated that, as part of its role – and on behalf of the Commonwealth – the department negotiates biosecurity conditions and operational protocols (for international market access) for agricultural commodities. It was noted that negotiations are conducted with a view to maximising trade, while at the same time meeting the requirements of importing countries. DA monitors changes in production systems and any potential quarantine concerns which could potentially threaten market access and works to minimise or prevent these impacts. In addition, the department is responsible for the monitoring of Australia's pest and disease status, and ensuring it meets our international obligations.

2.31 DA noted that, under the Imported Food Inspection Scheme, it undertakes testing for fenthion in imported commodities. As part of this testing, the department indicated that there have been no detections of fenthion (above the national standards prescribed in the Australia New Zealand Food Standards Code) in the last five years.

Minister for Agriculture

2.32 As noted previously, the APVMA is an independent statutory authority. The Minister for Agriculture's powers to direct the APVMA are set out in Sections 9A and 10 of the *Agricultural and Veterinary Chemicals (Administration Act) 1992*. Under this legislation, the Minister can only give a direction to ensure that the APVMA is acting in accordance with policies determined under agreements between the Commonwealth and the state and territory governments.

2.33 Importantly, the APVMA's legislation does not provide for the Minister for Agriculture to play a role in the decision making process of the APVMA with respect to the registration or review of chemicals. The committee was told that:

> The Minister cannot give a direction that would have the effect of requiring the APVMA to act in a manner inconsistent with its obligation to manage the risks of chemical use to human, animal and environmental safety.[17]

2.34 Specifically, DA indicated that:

> … there is currently no policy under the IGA about agvet chemicals regulation that could allow the Minister to give a direction about the APVMA's specific decisions on fenthion.[18]

Food Standards Australia New Zealand

2.35 Food Standards Australia New Zealand (FSANZ) is an independent statutory authority established under the *Food Standards Australia New Zealand Act 1991*. In setting food standards, FSANZ adheres to the policy guidelines developed by the

17 Department of Agriculture, *Submission 15*, p. 11.

18 Department of Agriculture, *Submission 15*, p. 11.

Coalition of Australian Governments (COAG) Legislative and Governance Forum on Food Regulation (the Forum).[19]

2.36 The committee was told that the primary function of FSANZ is to develop food standards for consideration by the Forum. In addition to its responsibility for developing food standards, FSANZ's legislative functions require it to:

- coordinate and report on food recall activities on behalf of state and territory jurisdictions;
- provide risk assessment advice to the Department of Agriculture where food imports present a medium or high food safety risk; and
- coordinate jurisdictional activities and facilitate common approaches in responding to food incidents that span state borders.[20]

2.37 Significantly, FSANZ is responsible for the development of an Australia-only standard – Standard 1.4.2: Maximum Residue Limits – that lists MRLs for residues of agricultural and veterinary chemicals permitted in food sold. Standard 1.4.2 provides that food must not have 'any detectable residue of a chemical that is not mentioned in the Standard or a chemical for which there is no permission for that food'.[21]

2.38 The committee was told that the APVMA and FSANZ both play a role in establishing MRLs to ensure that human health standards are not exceeded.

2.39 It was stressed that the setting of MRLs is an essential part of the scientific process and that they are of particular importance in relation to the legal supply of domestic produce and international trade. It was noted that, in setting an MRL for a chemical, it is very important that consumers' exposure to that chemical (and its defined breakdown products) through residues in the diet, is below the public health standard.[22]

2.40 FSANZ indicated that the organisation does not play a role in animal health risk assessment or standards, nor does it have powers in relation to the enforcement of standards in the *Australia New Zealand Food Standards Code* (the Code).[23] It does, however, have the power to vary the limits in the Code.[24]

2.41 It was noted that when FSANZ proposes to vary the Code, it is required to conduct at least one round of public consultation, and its decisions are subject to

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19 The COAG Legislative and Governance Forum on Food Regulation sits as the Food Regulation Ministerial Council.

20 Food Standards Australia New Zealand, *Submission 17,* p. 1.

21 Food Standards Australia New Zealand, *Submission 17,* p. 2.

22 Australian Pesticides and Veterinary Medicines Authority, *Submission 23,* p. 8.

23 Food Standards Australia New Zealand, *Submission 17,* p. 1.

24 Food Standards Australia New Zealand, *Submission 17,* p. 2.

consideration by the Forum. Variations to the Code made under this procedure are published after consideration by the Forum.[25]

2.42 It was noted that certain MRLs in the Code may also be varied by the APVMA.[26] In fact, FSANZ indicated that the majority of variations to Standard 1.4.2 now occur as a result of an action taken by the APVMA. FSANZ varies the Standard occasionally in response to applications made for specific changes or as a proposal prepared by FSANZ in response to representations made to FSANZ, primarily by importers of goods or foreign governments or organisations.[27]

Department of Health

2.43 An essential part of the risk assessment process undertaken by the APVMA is the setting of human health and/or environmental standards for safe levels of exposure to the chemical being reviewed.

2.44 The APVMA use the Department of Health's advice on human health standards when assessing the dietary risk of pesticides applied to food crops, like fenthion, to enable it to meet the legislative requirements of the Agvet Code.[28]

2.45 The Office of Chemical Safety (OCS), within the Department of Health, is responsible for setting health standards for determining dietary exposure through pesticide residues in food. The OCS undertakes a scientific assessment of all studies conducted on a chemical (and its adverse health effects). The studies consider a range of adverse effects, including the potential of the chemical to cause effects following a single exposure or repeated exposures (over long periods of time), the potential of the chemical to affect the brain, damage genetic material, cause cancer, disrupt reproduction, cause birth defects, damage the nervous system or damage the immune system.[29]

2.46 Based on this assessment, the OCS identifies the most sensitive, relevant adverse effect, which then forms the basis of the public health standard. A pivotal study is chosen that demonstrates a clear threshold of dietary exposure for the adverse

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25 Food Standards Australia New Zealand, *Submission 17,* p. 2.

26 The FSANZ Act provides that the APVMA may vary the Maximum Residue Limits Standard (Standard 1.4.2). Essentially, if the APVMA is considering a variation to the Agvet Code and forms an opinion that variation of the Standard is appropriate, the APVMA is required to give notice of that opinion to FSANZ. FSANZ is required to give public notice of the APVMA opinion. The APVMA can then proceed to develop a proposed variation and notify FSANZ of that proposed variation. FSANZ must either prepare, or oversee the preparation of, a dietary exposure assessment. A copy of the assessment and FSANZ's comments on the assessment is to be provided to the Forum. A variation made by the APVMA has effect on gazettal by the APVMA and registration under the *Legislative Instruments Act 2003.*

27 Food Standards Australia New Zealand, *Submission 17,* p. 2.

28 Department of Agriculture, *Submission 15,* p. 12.

29 Australian Pesticides and Veterinary Medicines Authority, *Submission 23,* p. 7.

effect, below which the effect does not occur.[30] The committee was told that the health standards are 'based on a standard international approach to risk assessment, using methodology consistent with international best practice'.[31]

2.47 The APVMA uses the public health standards set by the OCS to complete its dietary risk assessment for a particular chemical. This dietary risk assessment includes a consideration of the concentration of the chemical in food (either analysed concentration or the MRL), how much of certain foods Australian consumers eat, and consumption patterns by different age groups (including children).[32]

Department of the Environment

2.48 The Department of the Environment provides advice and environmental risk assessments,[33] to Australian chemical regulators (including the APVMA). The Department of Environment's advice and environmental risk assessments are considered by the APVMA when making regulatory decisions about agvet chemicals.[34]

State and territory departments and agencies

2.49 As indicated previously, the states and territories are directly responsible for regulating the use of chemicals after sale – referred to as control-of-use. The states and territories control-of-use regimes rely on permits granted by the APVMA and the directions for use approved by the APVMA.

2.50 The states and territories are also responsible for:

- ensuring that agvet chemicals are used legally (and according to the specifications set by the APVMA);
- training requirements for licensing and use of higher risk products;
- licensing of professional operators;
- monitoring and auditing of licence compliance and chemical residues in produce and the environment;
- investigations and resulting enforcement/compliance activities; and

30 Australian Pesticides and Veterinary Medicines Authority, *Submission 23*, p. 7.

31 Department of Agriculture, *Submission 15*, p. 12.

32 Australian Pesticides and Veterinary Medicines Authority, *Submission 23*, p. 7.

33 The Department of Environment's environmental risk assessments for the APVMA are undertaken in accordance with the Environmental Risk Assessment Guidance Manual for Agricultural and Veterinary Chemicals. The Manual was approved in 2009 by Environment Ministers from all states and territories and the Commonwealth.

34 Department of Agriculture, *Submission 15*, p. 13.

- education and extension programs.[35]

Issues raised by stakeholders

Complexity of regulatory system

2.51 The committee received substantial evidence from individual growers, industry organisations and peak bodies which raised specific concerns about the complexity of Australia's regulation system in relation to agvet chemicals. Stakeholders also raised concerns about what they described as a lack of clarity and clear direction in the regulation of agvet chemicals – particularly given the large number of organisations and agencies involved in the process.[36]

2.52 Mr Rod Thomson, a stone fruit grower from the north coast of NSW, told the committee that he has found the whole fenthion issue has been 'one of complete confusion'. Mr Thomson's comments echoed those made by a number of growers, when he argued that, when faced with the prospect of the removal of fenthion 'from the arsenal of control measures available to growers':[37]

> No clear direction or assistance was available to growers from any source. It has been left to individual food industries to try to develop their own alternative control measures as best they can. If ever there was a case for a co-ordinated national approach to a wide ranging problem, surely this is one.[38]

2.53 Mr Thomson also told the committee that:

> … from a grower's position, all I can see is a complete lack of coordination between all of the relevant authorities and stakeholders on this issue which potentially could have a devastating effect on the fresh fruit and vegetables supplied to Australian households and exporters. At times the inability to get direction from any of the participating stakeholders was staggering.[39]

2.54 Summerfruit Australia suggested that in relation to agvet chemicals 'there are a whole raft of instrumentalities that for much of the time are not in unison with each other'.[40] The industry group also argued that:

> The Australian Horticultural Industry is continually criticised by Government for being disjointed and lacking a singular approach to issues. Yet all parties fail to see how disjointed the processes are that are required

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35 Department of Agriculture, *Submission 15,* p. 1 and p. 10.

36 See, for example: Summerfruit Australia Limited, *Submission 9,* [p. 5], AUSVEG, *Submission 14,* [p. 1], Growcom, *Submission 19,* p. 4 and Mr Mark Napper, *Submission 21,* [p. 1].

37 Mr Rod Thomson, *Submission 3,* p. 1.

38 Mr Rod Thomson, *Submission 3,* p. 1.

39 Mr Rod Thomson, *Submission 3,* pp 2-3.

40 Summerfruit Australia, *Submission 9,* [p. 5].

> to support a strong, viable and profitable primary production sector. The regulation of pesticides and veterinary chemicals would be one of the more disjointed and overregulated sector[s] within primary production.[41]

2.55 Industry peak body Growcom also described Australia's regulatory system as too complicated and added that the system is also too expensive; and, as a result:

> … chemical companies have no incentive to invest in new chemistry for Australian conditions. It costs as much to register a product in Australia as it does in the US and our market is one tenth of the size. There is clear market failure that is not being addressed by the current regulation process and the minor use system. For example, there has not been a single new chemical registered for use in pineapples in 20 years despite significant numbers of chemicals being reviewed and removed from use.[42]

2.56 Growcom went on to argue that increased investment in a broken system will not provide a solution, nor will it deliver the best return on that investment. The peak body was also critical of a recent review of the APVMA fee structure which recommended a 100 per cent cost recovery for permits – a move it suggested was likely to further entrench market failure.[43]

Lack of coordination between government and industry

2.57 Peak industry body AUSVEG argued that, in relation to the regulation of agvet chemicals, there has been a significant disconnect both between – and within – the various levels of government. It was argued that this situation creates problems at both policy and operational levels:

> From a policy perspective, this disconnect has been highlighted through the relatively poor track record of the States and Territories in reaching agreement on various Agvet chemical-related COAG reforms.[44]

2.58 In providing evidence to the committee in Perth, representatives of Fruit West were also critical of the lack of coordination and cooperation between Commonwealth, state and industry organisations:

> It has been a matter of some frustration to know that there has been a review in process for 15-odd years and trying to get any traction from government, anyone in industry or anyone in between up until the last two years. Until two years ago growers would tell me that the government could not withdraw a chemical without replacing it with another one, and state agriculture ministers would tell me that it was not their problem.[45]

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41 Summerfruit Australia, *Submission 9,* [p. 5].

42 Growcom, *Submission 19,* p. 4.

43 Growcom, *Submission 19,* p. 4.

44 AUSVEG, *Submission 14*, p. 2.

45 Mr Mark Wilkinson, Chair, Fruit West Summerfruit Leadership Group and Member, Fruit West Board, *Committee Hansard,* 3 February 2014, p. 2.

Committee comment

2.59 The committee acknowledges the concerns raised by stakeholders in relation to the complexity of the regulation process for agvet chemicals.

2.60 Throughout its inquiry, it has become clear to the committee that it can be both difficult and frustrating for stakeholders to navigate the various layers of Commonwealth and state bureaucracy and the various levels of industry representation.

2.61 The committee suggests that this confusion is likely exacerbated through the widely-held perception that, as the agency with primary agency responsibility for the regulation of agvet chemicals, the APVMA should also be the agency with primary responsibility for communicating with growers. As is demonstrated by the regulatory summary earlier in this chapter, not all responsibilities in this area lay with the APVMA.

2.62 The committee acknowledges that the APVMA is in the difficult position of attempting to perform its primary function of 'regulator', whilst attempting to communicate to industry that it does not have the legislative power to become involved in activities such as identifying market opportunities, conducting specific research projects, generating data or identifying alternatives to restricted chemicals.

2.63 The committee cannot offer an immediate or guaranteed solution to the regulatory complexity or the confusion over the role of the APVMA. However, it does recommend that renewed effort be made to communicate to stakeholders the respective roles and responsibilities of each department and agency, in a format and using language that is accessible to them. All relevant departments and agencies, including those at state and territory level, should be encouraged to cooperate in achieving this objective.

2.64 The committee notes the regulatory complexity and confusion over the role of the APVMA. The committee considers that a collaborative effort between relevant Commonwealth, state and territory agencies to clearly and simply communicate their respective roles in relation to regulating agricultural chemicals and veterinary medicines would do much to alleviate confusion, and recommends that a concerted effort be made to address this issue. The committee also recommends that Commonwealth, state and territory governments review the complex arrangements and relevant legislation and regulations, with the aim of simplifying and streamlining, but not weakening, the regulation of agricultural chemicals, and providing greater certainty and transparency to stakeholders. In the committee's view, the appropriate body to take the lead in this process is the Commonwealth Department of Agriculture.

Recommendation 1

2.65 The committee recommends that all relevant Commonwealth, state and territory agencies be encouraged to cooperate to better convey their respective

roles and responsibilities in relation to the regulation of agvet chemicals to stakeholders.

Recommendation 2

2.66 The committee recommends that all relevant Commonwealth, state and territory agencies be encouraged to undertake a collaborative communications program which clearly and simply communicates their respective roles and responsibilities in relation to the regulation of agvet chemicals to stakeholders.

Recommendation 3

2.67 The committee recommends that the Commonwealth, state and territory governments review arrangements, legislation and regulations relating to agvet chemicals, with the aim of simplifying and streamlining, but not weakening, the regulation of agvet chemicals, and providing greater certainty and transparency to stakeholders.

Chapter 3

The chemical review of fenthion and its impact on industry stakeholders

3.1 The terms of reference for the committee's inquiry required the consideration of the chemical review process undertaken by the APVMA in relation to fenthion. The committee examined the processes undertaken by the APVMA (in its attempt to determine whether the chemical's use should be further restricted, suspended or withdrawn completely).

3.2 Another primary focus for the committee was to determine the level of impact restricting, (suspending or cancelling) the use of fenthion will have on Australia's horticultural industry. The following chapter outlines the evidence provided by various industry stakeholders about the potential impacts the restriction of fenthion is likely to have – on individuals, businesses and Australia's horticultural industry more generally.

Chemical review of fenthion

Background

3.3 Fenthion is a broad spectrum organophosphate (OP) insecticide used in horticulture, home gardens and domestic and industrial pest control. The chemical first came into use internationally in 1965 and has, for many years, been an important part of insect pest control – particularly for fruit fly – in a number of fruit growing areas across Australia. Fenthion has also been used as a quarantine treatment (to eradicate fruit fly on tropical and subtropical fruit and fruiting vegetables prior to interstate trade)[1] and to control external parasites on cattle and pest birds around buildings.

3.4 The APVMA noted that fenthion is a nerve poison that works by interfering with the nervous system of animals, including insects and birds. The nervous system – including the brain, spinal cord and nerves – is responsible for controlling and coordinating voluntary and involuntary movement through the generation of chemical and electrical signals.[2]

3.5 Since the mid to late 1990's, the use of fenthion on food producing plants has been phased out in a number of countries and the chemical is no longer registered for use on food producing plants in the European Union, the United States, Canada or New Zealand.[3]

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1 Apple and Pear Australia Limited, *Submission* 4, [p. 1] and Australian Pesticides and Veterinary Medicines Authority, *Submission 23*, p. 1.

2 Australian Pesticides and Veterinary Medicines Authority, *Submission 23*, p. 9.

3 Apple and Pear Australia Limited, *Submission* 4, [p. 1] and Australian Pesticides and Veterinary Medicines Authority, *Submission 23*, p. 1.

3.6 The APVMA noted that, when the Chemical Review Program was introduced in 1994, fenthion was one of the 80 chemicals nominated for reconsideration. The nomination of fenthion as a chemical for review came about as a result of new data which raised concerns about public health, occupational health and safety, and environmental risks. The committee was told that the human health concerns, in particular, came about because, like other OPs:

> … fenthion has the potential to cause significant adverse health effects (including death) in people following a single exposure (known as acute toxicity). Fenthion is reported to have both short-term and long-term effects on the brain and nerves of people.[4]

3.7 The committee notes that several witnesses questioned the scientific veracity of this comment.

3.8 The APVMA also noted that fenthion has several breakdown products (degradates or metabolites) that form in plants and the environment after spraying and can cause adverse health effects in people. These metabolites, which form a significant proportion of the total residue found on treated produce are included in the 'residue definition' for fenthion. MRLs set for fenthion include these metabolites.[5]

3.9 The committee acknowledges the APVMA's finding that fenthion has the potential to cause adverse health effects. Nonetheless, while the committee is not qualified to assess the veracity of the APVMA's assessment, nor the weight of evidence that the APVMA submits it relied on in making its assessment, it notes with concern that the only human-derived source of evidence supporting the APVMA's conclusion with respect to fenthion is a 35 year old unpublished paper titled *Safety Evaluation of Fenthion in Human Volunteers* (Coulston et al).

3.10 Furthermore, the committee notes the Coulston paper's conclusion that few, if any, verifiable effects attributable to the chemical were evident, and the comment made in the APVMA Review of the toxicology of Fenthion that 'This 1979 study was considered to have serious flaws…The symptoms reported by the subjects and the occasional exculpatory note are insufficiently detailed to allow independent assessment of their significance'.[6]

3.11 In correspondence provided to the committee by the APVMA, the Advisory Committee on Pesticides and Health, which set the Acute Reference Dose for fenthion in 2000, acknowledged that the Coulston study 'may not be perfect by contemporary standards'. However that Committee still considered it to be the most appropriate study for setting the fenthion ADI, (Acceptable Daily Intake) especially when the 'weight of evidence' approach was taken.[7].

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4 Australian Pesticides and Veterinary Medicines Authority, *Submission 23,* p. 9.

5 Australian Pesticides and Veterinary Medicines Authority, *Submission 23,* p. 9.

6 *The APVMA Review of Fenthion,* Appendix XI, p. 135.

7 Additional Information, correspondence from APVMA, dated 24 June 2014; *The APVMA Review of Fenthion,* Appendix XI, p. 174

3.12 Evidence was presented to the committee of chemical testing on apricots and peaches around Australia in the 2013-14 summer. Evidence to the committee was that fruit sample numbers containing fenthion levels exceeding the allowable MRL (0.02 mg/kg) were very low, especially in contrast to other chemicals monitored at the same time.[8]

3.13 Some committee members questioned whether the incidence of excessive fenthion residuals was confined to a limited number of orchards. Such a conclusion would point to the need for education of offending orchardists or their exclusion from selling product through the markets.

3.14 The question hanging over the committee is whether fenthion could continue to be used during a transition period, given that the majority of orchardists told the committee they were using it responsibly and according to label, while they transition to other management techniques to control Medfly.

Decisions made by the APVMA

3.15 The APVMA's submission provided the committee with a detailed account of the review process it undertook in relation to fenthion. The APVMA told the committee that the process commenced in 1998, when the then National Registration Authority (NRA) requested information on fenthion from registrants and industry. At the same time, in order to assist the APVMA to define the risk assessment components, the NRA invited public submissions about the current use, or problems associated with the continued use, of fenthion.[9]

3.16 The APVMA split the review of fenthion into two parts. Part 1 dealt with products used in non-food producing situations, including products used in the home garden, flea products for dogs and home insecticide sprays. When decisions in relation to these product types were made in 2005, some home garden products were cancelled and bird control products containing fenthion were declared Restricted Chemical Products (RCPs).[10]

3.17 The second part (Part 2) of the review included products used on food, commercial and home garden products for fruits and vegetables and a veterinary cattle

8 Mr Brett DelSimone, Hills Orchard Improvement Group, *Committee Hansard*, 3 February 2014, p. 23 and Dr Raj Bhula and Ms Kareena Arthy, Australian Pesticides and Veterinary Medicines Authority, *Committee Hansard*, 7 July 2014, pp 5 and 6.

9 Australian Pesticides and Veterinary Medicines Authority, *Submission 23*, p. 9.

10 Australian Pesticides and Veterinary Medicines Authority, *Submission 23*, p. 10.

product. Table 3.1 provides a timeline and a summary of Part 2 of the review process undertaken by the APVMA and the decisions made in relation to fenthion.[11]

Table 3.1: Part 2 of the review of fenthion conducted by APVMA[12]

30 January 1999	The end of January 1999 was set as the closing date for submissions. The APVMA's review commenced shortly after submissions were received. The scope of the fenthion review included public health (which incorporated a toxicological and residue assessment), worker safety, environment and trade. The toxicological and worker safety assessments were conducted by the OCS, the environment assessment by the Department of Environment and the residue and trade assessment by the APVMA.
2000	The OCS implemented a policy of setting acute reference doses for the first time in Australia. As part of that policy, an acute reference dose was set for fenthion. (The assessment of fenthion and its other health impacts included an examination of the extensive toxicological database on fenthion and this process continued for a number of years).
2004-05	The APVMA had discussions with the registrant and user industry regarding the lack of residue data to allow establishment of MRLs for use of fenthion products in fruits and vegetables, particularly for fruit fly control. The APVMA gave the industry time to generate the necessary residue data with a view to providing an opportunity for a full review of uses approved on the registered label. Some uses included post-harvest dipping of fruit and vegetables for fruit fly control.
2005	The full human health assessment in relation to fenthion was completed.

11 The table describing the review process and decisions made by the APVMA is based on information provided in Australian Pesticides and Veterinary Medicines Authority, *Submission 23*, pp 9-12, Australian Pesticides and Veterinary Medicines Authority, Media Release, *APVMA releases fenthion review for final phase of consultation*, 22 May 2012 and Australian Pesticides and Veterinary Medicines Authority website http://www.apvma.gov.au/consultation/public/2014/prf_fenthion.php, accessed 4 June 2014.

12 Pertaining to products used on food, commercial and home garden products for fruits and vegetables and a veterinary cattle.

December 2005	The APVMA published the toxicology report on fenthion. In the report, both the acute reference dose and acceptable daily intake previously set by the OCS were published.
July and August 2010	Horticulture Australia Limited (HAL) submitted Australian residue data on fenthion and dimethoate for assessment by the APVMA.
September 2012	The *Fenthion Residues and Dietary Risk Assessment Report* was published. The report outlined that for peaches, the dietary exposure of children (aged from two to six years old consuming fruit treated according to the registered label directions) was more than 10 times above the acute reference dose. These dietary exposures were so high in some cases to put particularly sensitive children at risk, as the buffers designed to completely protect all consumers were eroded. Where the dietary exposure exceeds the public health standards, the APVMA cannot be satisfied that the use of the produce with the existing label instructions would be safe for people and MRLs cannot be established, thereby leading to use patterns being removed.
11 September 2012	The APVMA: • proposed that all uses patterns of concern on apples, pears, citrus, figs, loquats, quince and stonefruit, grapes, olives, pepinos, eggfruit, tomatoes and postharvest use on vegetables be suspended; and • called for proposals from industry for modified use instructions for crops where safety concerns had been identified. This was in recognition that the risk to consumers arising from the use of fenthion on those crops could be addressed by reducing the residues on those crops of concern.
25 September 2012	The closing date for proposals/submissions from industry. The APVMA received over 70 submissions – 67 of which came from Western Australia. Whilst several industry groups responded and proposed alternate reduced use patterns for fenthion, the proposals did not provide sufficient 'additional residues data' to support the proposed modified use patterns. Residues monitoring data submitted to the APVMA was mostly sourced from Quality Assurance testing schemes. (The APVMA noted that these

	types of schemes typically only test for the fenthion parent compound, not all of the relevant metabolites. The information is therefore of limited regulatory value for establishing new MRLs).
31 October 2012	The APVMA suspended the registration and labels of the two fenthion products used on food producing plants. As part of the conditions of suspension of these products, they could only be used according to new, modified instructions. The modified instructions for use were developed based on reduced use patterns proposed by industry which were assesses for safety, and in most cases, accepted by the APVMA. New, lower MRLs were established to support these new use instructions.
31 October 2012	The new instructions for use by growers (in relation to stonefruit) included use for control of Queensland fruit fly up to a minimum of 21 days before harvest (the 'withholding period'). For the Mediterranean fruit fly (Medfly) in Western Australia, the available data supported a seven day withholding period with a maximum of two sprays per season. The APVMA indicated that these instructions were developed on advice from relevant bodies and represented a modification of the initial recommendations in the 11 September 2012 report, which called for the complete cessation of fenthion use for stonefruit. Industry was advised that for some use patterns (notably stonefruit) the limited data could only support use under the suspension for 12 months from 31 October 2012 to 30 October 2013. Industry was also advised that prior to October 2013, the APVMA would reconsider the suspension and the conditions under which fenthion could be used. Industry groups were invited to collect and submit further residue data to the APVMA.
Post 31October 2012	The APVMA received further residues monitoring data from two industry groups in Western Australia for the 2012-13 season to support the continued use of fenthion under the modified use instructions put in place as part of the suspension.
17 and 31 July 2013	Residues monitoring data results were received. However, these submissions did not include testing of all the metabolites

	of fenthion.
9 August 2013	The APVMA received a study, funded by HAL, reporting the residues in stonefruit following treatment with fenthion under the modified use regime. This study included testing for all of the metabolites of fenthion as specified in the Australian residues definition for fenthion and was conducted according to required standards of good laboratory practice.
August/September 2013	The supplementary residues data was assessed by the APVMA. Following analysis of the new information provided by industry, the APVMA indicated that it could no longer be satisfied that stonefruit sprayed with fenthion would have safe residue levels after a withholding period of only seven days. The residues assessment supported a withholding period of 14 days for nectarines and plums. For peaches and apricots, the assessment did not support any continued use of fenthion.
16 October 2013	The APVMA further restricted the use instructions for fenthion on stonefruit and the suspension was continued until 30 October 2014. The *Supplementary Fenthion Residues and Dietary Risk Assessment Report* was published on the APVMA website at the time of this decision.
25 October 2013	Summerfruit Australia applied for a permit to use a single spray of fenthion on peaches and apricots with a withholding period of 21 days before harvest.
29 October 2013	Summerfruit's application for a permit (for a more restricted pattern of use) was approved on the basis that the dietary risk was reduced to an acceptable level in relation to the public health standard; and the existing lower MRL could still be met. The permit was held by Summerfruit Australia with use up until 30 April 2014. (This permit was not linked with the APVMA use instructions under the suspension continuation issued on 16 October 2013, which expires on 30 October 2014).
22 May 2014	The APVMA published the *Preliminary Review Findings Report* in relation to fenthion. The APVMA's report recommended further restriction to the use of fenthion. The report noted that an assessment of available data concluded that the use of products containing fenthion, may, in most situations, pose undue risks to human health (via

	dietary and occupational exposure) and to the environment. The APVMA proposed the following regulatory actions to manage the risks: • cancellation of a cattle lice control product; • cancellation of all pest control and home garden products except fenthion 1 per cent dust product; • variation of the label of the fenthion 1 per cent dust product to remove use in ceilings, wall spaces and crawl spaces and update the safety directions; and • variation of the label of the horticultural product to remove all uses except post-harvest dipping of tropical and subtropical fruits with inedible peel, and to update safety directions and warnings.
22 August 2014	*Preliminary Review Findings Report* in relation to fenthion has been made available for consultation and submissions have been invited from interested parties by 22 August 2014. The APVMA indicated that it will consider submissions before making a final regulatory decision.

3.18 The APVMA noted that that from 2011 onwards, it did issue permits for alternate uses of fenthion to control fruit fly, and alternative chemicals for the control or suppression of fruit fly in certain crops.[13]

3.19 The requests for permits came from grower groups, industry bodies and states and territories. The APVMA told the committee that decisions made in relation to the issuing of permits were science-based, and involved consideration of all the data available at the time. The APVMA specifically noted that, in relation to fenthion, the proposed pattern of use (the number of sprays and associated withholding periods) was assessed to confirm compliance with the relevant public health standards.[14]

Chemical review of fenthion – issues raised by stakeholders

Support for the review

3.20 A number of stakeholders expressed support for the APVMA's review, particularly given concerns about the health risks associated with fenthion.[15]

13 Australian Pesticides and Veterinary Medicines Authority, *Submission 23*, p. 12.

14 Australian Pesticides and Veterinary Medicines Authority, *Submission 23*, p. 12.

15 See, for example, Donnybrook Orchard Improvement Group, *Submission 8*, Nannup Fresh Fruit Pty Ltd, *Submission 7,* CropLife Australia, *Submission 13,* Alliance for a Clean Environment, *Submission 16,* and Mr David Eyre, *Submission 25.*

3.21 The Queensland Department of Agriculture, Fisheries and Forestry (Queensland DAFF) expressed its support for the APVMA's review, particularly given the level of international concern about the acute toxicity of organophosphorous pesticides. Specifically, Queensland DAFF argued that:

> … it was appropriate that compounds such as fenthion and dimethoate were some of the highest priority chemistries for review. This was particularly important because the previous registration decisions only considered chronic toxicity in human dietary risk assessments.[16]

3.22 The Department of Primary Industries and Regions South Australia (PIRSA) also indicated that it 'supports the science based approach of risk as undertaken by the APVMA, particularly when there are risks to human health'. At the same time, however, some concerns were expressed about the process itself. PIRSA contended:

> … that better outcomes for public health and the development of effective alternative treatments and management strategies could have been achieved with a more efficient review process followed by a transparent and effective implementation schedule. This would have provided the confidence necessary for industry to invest in the development and implementation of new practices to manage fruit fly risks. It would have also helped to reduce some stakeholder disengagement and avoidance of difficult decisions, which can occur when decision-making is continually extended and final deadlines are unknown.[17]

Support for an independent regulator

3.23 A number of submitters expressed support for the APVMA. Specifically, stakeholders stressed the importance of maintaining an independent and science-based regulatory system.[18]

3.24 CropLife Australia acknowledged that there is a strong argument for improving the timeliness and efficiency of the APVMA's chemical review process. However, at the same time, it asserted that the APVMA must continue to base its regulatory decisions 'within the legislative and regulatory framework provided for in the *Agricultural and Veterinary Chemicals Code Act 1994*':[19]

> Allowing undue influence from activist groups, industry or any other third parties on registration decisions by the APVMA would compromise the integrity and credibility of the agricultural chemical (crop protection) registration system. CropLife strongly considers that a move away from this system would be to the long-term detriment of Australia's farming sector.

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16 Queensland Department of Agriculture, Fisheries and Forestry, *Submission 6*, p. 2.

17 Mr Will Zacharin, Biosecurity SA, Department of Primary Industries and Regions South Australia, *Committee Hansard*, 16 April 2014, p. 37.

18 See, for example, Queensland Department of Agriculture, Fisheries and Forestry, *Submission 6*, CropLife Australia, *Submission 13*, and Alliance for a Clean Environment, *Submission 16.*

19 CropLife Australia, *Submission 13*, Covering letter, p. 1.

> Australia is fortunate that it currently has an independent regulator and this is something that must be protected.[20]

Time taken to complete reviews

3.25 The committee received evidence from a number of individuals and organisations that were critical of the length of time taken for APVMA to complete reviews of chemical products.[21]

3.26 The Horticulture Coalition of SA noted that of particular concern to the group is a perceived 'lack of sufficient resources available to APVMA to undertake reviews in an efficient manner and timeframe'.[22] The group suggested that the length of time taken to conduct reviews was a major issue, given that the reviews of dimethoate and fenthion have 'been at least ten years in the process'.[23]

3.27 The APVMA acknowledged in its submission that chemical reviews are 'large, complex projects that necessarily take a considerable period of time to complete for a number of reasons',[24] including:

- There are large amounts of technical data that are scientifically evaluated, often by experts external to the APVMA. These rigorous processes use internationally established methods and can take a considerable period of time to complete. The conclusions of the scientific assessments are based on the best available information at a point in time.
- Often new information will become available during the course of a review, such as new published studies or unpublished studies conducted to address a data gap identified by the APVMA, or provided voluntarily by approval holders, registrants or users. Under the current system, this can often drive a review into an iterative process where reports are updated as new information becomes available or is submitted over relatively long periods of time.
- Any potential decision to restrict or remove a chemical from the marketplace may have a significant impact on user groups and primary producers. For this reason, the communication activities and engagement

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20 CropLife Australia, *Submission 13*, Covering letter, p. 1.

21 See, for example, Summerfruit Australia, *Submission 9,* Horticulture Coalition of SA, *Submission 11,* Hills Orchard Improvement Group, *Submission 1,* CropLife Australia, *Submission 13*, and Alliance for a Clean Environment, *Submission 16.*

22 Horticulture Coalition of SA, *Submission 11*, [p. 2].

23 Horticulture Coalition of SA, *Submission 11*, [p. 2].

24 Australian Pesticides and Veterinary Medicines Authority, *Submission 23*, p. 5.

> around chemical reviews with the jurisdictions, approval holders/registrants and users can be lengthy and complex.[25]

Implications for the horticultural industry

3.28 The Minister for Agriculture recently noted that the total value of Australian horticulture production in 2012-13 was over $8 billion. It was also noted that over 75 percent of Australia's fruit and vegetable exports – valued at around $640 million in 2012-13 are susceptible to fruit fly.[26]

Economic loss

3.29 The committee received evidence from a number of stakeholders – including peak industry bodies, grower organisations and individual growers – about the economic impact of restricting (and eventually discontinuing) the use of fenthion. The committee found that opinion was very much divided – particularly in Western Australia – regarding the effect that restrictions would have on the horticultural industry. Whilst some organisations spoke of severe and irreversible damage, others noted that the industry had been aware of the possibilities for some time, that change was inevitable and that industry has been preparing for it.

3.30 NSW industry group Summerfruit Australia predicted that the impacts on their grower members would be major, and argued that:

> The impact of the loss of Dimethoate and the restriction in use of Fenthion in 2013/4 has been highlighted in the increase in damage to stonefruit across all growing regions. The loss is estimated at $125 Million. (Vickers 1994), possibly in current terms $150 Million.
>
> The long term impact is that if no other controls of Fruit Fly are found then the stonefruit industry in Australia could rapidly decline resulting in business closing, jobs being lost and the viability of the industry threatened. The Australian consumer may well have to rely on imported stonefruit from a range of overseas countries to satisfy the domestic market.[27]

3.31 The Hills Orchard Improvement Group (HOIG) also predicted that the removal of fenthion would have severe, negative impacts on the industry. HOIG told the committee that growers in the Perth hills produce more than $40 million a year of stonefruit, apples and pears. The group also noted that, in 2012, it had made the prediction that 'a ban on fenthion could lead to the total destruction of the stonefruit crop and the loss of a significant portion of the apple crop in the south west of Western Australia'.[28]

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25 Australian Pesticides and Veterinary Medicines Authority, *Submission 23,* p. 5.

26 Media Release, The Hon. Barnaby Joyce, MP, Minister for Agriculture, *Getting fruit fly under control a national priority*, 7 May 2014, p. 1.

27 Summerfruit Australia, *Submission 9,* [p. 6].

28 Hills Orchard Improvement Group, *Submission 12,* p. 6.

3.32 HOIG argued that the crop losses growers could experience without access to fenthion were substantial. The example was used of the 2012-13 growing season when adverse weather conditions saw fruit fly numbers increase significantly. At the time, growers were permitted two applications of fenthion, however crop losses were estimated across the board at 50 percent – with one orchard experiencing a loss of 100 percent.[29]

3.33 Mr Mark Napper, a stone fruit grower from Bangalow, New South Wales, told the committee that in recent years, a number of his neighbours and long term growers in the area had exited the industry citing the APVMA's decision on fenthion as the final 'nail in the coffin'. Mr Napper also indicated that that the APVMA decision has had a negative impact on growers, both financially and personally.[30]

3.34 The views put forward by Growcom were typical of those expressed by a number of submitters:

> It is absolutely undeniable that the restriction of the use of Fenthion has a significant and difficult to manage impact on the Australian horticulture industry. We are deeply sympathetic to those growers and industries adversely affected.[31]

3.35 Low Chill Australia (LCA)[32] told the committee that approximately 50 percent of its members' plantings are peaches, which means that both the short and long term impacts of the proposed ban on fenthion are devastating. It was noted that many peach trees are being removed, which led the LCA to suggest that it was likely that the only peaches that would be available in Australia during the July-November period would be those imported from the United States.[33]

3.36 The claims made by some sections of the industry were strongly disputed by another. For example the Donnybrook Orchard Improvement Group (DOIG) argued that:

> Western Australia has a robust fruit industry that will prosper and produce good fruit without fenthion. The damage to the industry does not arise from the restrictions on fenthion; unfortunately the damage to our market and the industry is caused by the irrational advocacy of those opposed to the restrictions on fenthion.[34]

3.37 DOIG also told the committee that it was important to recognise that:

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29 Hills Orchard Improvement Group, *Submission 12,* p. 6.

30 Mr Mark Napper, *Submission 21,* [p. 1].

31 Growcom, *Submission 19,* p. 3.

32 Low Chill Australia Inc. is the national peak industry body representing low-chill stone fruit producers and its supply chain service providers (primarily in the areas around the NSW North Coast and the Queensland Sunshine Coast).

33 Low Chill Australia Inc., *Submission 22*, [p. 4].

34 Donnybrook Orchard Improvement Group, *Submission 8*, p. 4.

> … good fruit can be effectively grown without the use of fenthion as a cover spray and that in a world market that is increasingly cautious of all chemicals the cessation of fenthion as a cover spray is inevitable.[35]

3.38 These views were shared by Nannup Fresh Fruit Pty Ltd, which argued that:

> Whilst a small number of growers will need to rapidly progress from their current practise to the use of new chemicals and methods the impact on the overall industry will be minimal. Large portions of the industry have heeded the advice given them and have transitioned to different use methods already.[36]

3.39 The APVMA acknowledged that, as an organisation, it is very restricted in what it can take into consideration when undertaking reviews. Whilst issues around human, animal and environmental health and safety, efficacy and international trade are routinely taken into consideration, the Authority is not able to take economic factors into account when making decisions. Chief Executive Officer, Ms Kareena Arthy, noted that:

> One of the things that often gets put to us is: why don't you do a cost benefit analysis about the use and non-use of this chemical. That is not within our purview to do, because it is not part of our legislative decision making. That is where it becomes a bit tricky about what we can and can't do.[37]

The lack of a single-use control

3.40 The lack of a single-use chemical mechanism for fruit fly control was also raised as an issue by other stakeholders.

3.41 HOIG stressed their concerns about fenthion being 'the only product registered and proven by structured in-field testing that will kill the fruit fly larvae or maggot and all other stages of the life cycle'.[38]

3.42 Apple and Pear Australia Limited (APAL) told the committee that 'the likelihood of a suspension in the registration of fenthion has come as a blow to many apple and pear growers, because':[39]

> … there are no alternative cover sprays that are effective in the control of Mediterranean and Queensland fruit fly. Cover sprays like fenthion are particularly effective because they kill adult fruit flies on contact, as well as penetrating the edible fruit flesh, killing eggs and larvae within apples and pears.[40]

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35 Donnybrook Orchard Improvement Group, *Submission 8*, p. 4.

36 Nannup Fresh Fruit Pty Ltd, *Submission 7*, [p. 2].

37 Ms Kareena Arthy, Australian Pesticides and Veterinary Medicines Authority, *Committee Hansard*, Briefing on use of fenthion, 9 December 2013, p. 4.

38 Hills Orchard Improvement Group, *Submission 12*, [p. 6].

39 Apple and Pear Australia Limited, *Submission* 4, pp [1 and 2].

40 Apple and Pear Australia Limited, *Submission* 4, pp [1 and 2].

3.43 APAL also argued that the restricted use and likely suspension of fenthion is particularly problematic because in 2011, the registration of dimethoate (another common cover spray used against fruit fly) was also suspended.[41]

3.44 Industry group Growcom noted that there is no 'silver bullet' replacement for Fenthion and fellow cover spray Dimethoate' and argued that as community concerns around chemical use intensify 'more work needs to be done to increase the number of tools in our crop protection toolbox'.[42] It was also argued that:

> … if there were viable alternatives in place to manage fruit fly that were economically feasible and accepted by our trading partners then many of the concerns around the restriction of Fenthion would disappear.[43]

3.45 The committee heard that there had been some problems in the Perth Hills area, particularly for those growers who have been seeking to identify alternatives to fenthion and move toward Area Wide Management (AWM) techniques. It was suggested, for example that:

> Any alternatives to Fenthion are seen as a threat to the maintenance of the use of Fenthion. Any grower, scientist or industry body that may express a view, or point out a fact that may weaken the image of solidarity and crisis, about the use of Fenthion is to be silenced. … The perception among growers that Fenthion use will be maintained and that alternatives will weaken the case has led to two seasons of at best secretive preparations for a post Fenthion world …[44]

3.46 Mark Wilkinson further argued that the removal of fenthion as an option will mean that a large number of growers will 'have to start from a position of no experience and reduced support'.[45]

3.47 As a grower with limited experience of AWM, Mr Rod Thomson told the committee that during the 2013 season he attempted to incorporate AWM into the management of his orchard, as 'part of a very mixed QFF control program'.[46] Mr Thomson noted that whilst results under 2013 conditions did provide good control of QFF:

> … we did have Fenthion available for use in the early season which will not be the case for peaches next season and we did have dry weather for the late maturity season in November which is abnormal.[47]

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41 Apple and Pear Australia Limited, *Submission* 4, pp [1 and 2].

42 Growcom, *Submission 19,* p. 4.

43 Growcom, *Submission 19,* p. 4.

44 Mr Mark Wilkinson, *Submission 20,* [p. 2].

45 Mr Mark Wilkinson, *Submission 20,* [p. 2].

46 Mr Rod Thomson, *Submission 3*, p. 4.

47 Mr Rod Thomson, *Submission 3*, p. 4.

3.48 Mr Thomson admitted that his lack of experience without fenthion makes it difficult to judge what future outcomes are likely to be, particularly as conditions and circumstances can vary considerably from season to season. He acknowledged however, that whilst his business is 'still a long way from commercial confidence'[48] he is aware of the QFF control experiences that some other industries have successfully adopted and this has provided some guidance in his AWM efforts so far. Mr Thomson also argued that the availability of a half rate Fenthion treatment could be very useful in conjunction with AWM of QFF, particularly in the transition years.[49]

3.49 Queensland DAFF acknowledged that, in some cases, alternative chemical treatments for fruit fly control in the field are not as effective as the dimethoate and fenthion products. At the same time, however, it recognised that:

> … continued use of fenthion and dimethoate for horticultural produce poses an unacceptable dietary risk to humans.[50]

Market access

3.50 The Department of Agriculture (DA) submitted that controlling fruit fly is important to enable export market access of many commodities being traded internationally. However it also submitted that restrictions on the use of fenthion would have a negligible impact on international market access for Australian agricultural products. The committee was told that exports of fresh horticulture products account for 7.4 percent of the total value of horticulture production ($9.0 billion). It was also noted, however, that whilst controlling fruit fly is important to maintain export market access for commodities being traded internationally:

> … the use of fenthion is limited as a quarantine treatment (many countries ban fenthion and there is only one export market requiring fenthion treatment – choko to New Caledonia). The potential impact of banning fenthion is therefore on domestic trade.[51]

3.51 Nonetheless, the committee heard that there are advantages to being able to achieve fruit-fly free status. In giving evidence at the committee's Loxton hearing, Ms Maria Costi (representing Venus Citrus) was asked whether the company had been exporting any fruit to China:

> **Ms Costi:** Yes, we did last year. It was not the biggest program. And we are planning to do so this season as well.
>
> **Senator Ruston:** If we were able to get fruit-fly free status for South Australia, what sort of impact would that have on your capacity to take advantage of the Chinese market.

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48 Mr Rod Thomson, *Submission 3*, p. 4.

49 Mr Rod Thomson, *Submission 3*, p. 4.

50 Queensland Department of Agriculture, Fisheries and Forestry, *Submission 6*, p. 8.

51 Department of Agriculture, *Submission 15*, p. 2.

> **Ms Costi:** It would be fantastic. It would be like every other market we do: you would put more into it. Again, cold treatment is an added cost. China is a market that is growing. It would be great for the industry and it would mean better returns for the growers. Again, it would take away that cost of $3 or $4.[52]

3.52 The committee also heard how export markets could react negatively to a fruit fly outbreak in South Australia, and the efforts undertaken to manage outbreaks in a way to maintain those markets. Citrus Australia – SA Region submitted that, following two QFF outbreaks in the Riverland early in 2014:

> We have had a constant dialogue in place with Biosecurity SA and the [Federal] Department of Agriculture (DAFF) to work through the implications to our industry resulting from the declaration of the outbreaks. We will have to carefully manage our trading partners' protocols for our entire export season.[53]

Committee comment

3.53 The committee supports both the APVMA's independence and its primary role as a regulator. The committee understands that the APVMA is somewhat restricted when it comes to the types of issues it is able to take into consideration when undertaking reviews. The committee notes that whilst human, animal and environmental health and safety and international trade are taken into consideration, the APVMA's remit does not allow it to take economic factors – or the possible impacts on specific industries – into account when conducting reviews.

3.54 The committee understands the frustrations expressed by industry organisations and individual growers to whom it would seem vitally important to take both economic and commercial impacts into consideration.

3.55 The committee acknowledges that there are a number of stakeholders – particularly in Western Australia – who are of the view that the removal of fenthion will have a severe, negative impact on their own businesses and on Australia's horticultural industry more generally. The committee acknowledges that these are genuine concerns and their representations have been made based on their belief that, without using fenthion as a cover spray, their orchards – and their region – could be facing substantial crop losses.

3.56 At the same time, however, the committee agrees that it is fundamentally important that reviews undertaken by the APVMA are conducted using a science-based approach to risk management – particularly when there is any suggestion of possible risks to human health. Absent the means with which to independently verify the APVMA's conclusions as to the toxicity of fenthion, at realistic doses, and in humans, the committee can only accept the evidence given by the agency that its assessment processes were thorough, and based on sound science.

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52 Ms Maria Costi, Venus Citrus, *Committee Hansard*, 16 April 2014, p. 20.

53 Citrus Australia – SA Region, *Submission 29*, p. 2.

3.57 The committee therefore concludes this chapter with the observation that the issues surrounding the use of fenthion (and other chemical reviews previously undertaken by the APVMA) create a longer term public policy challenge. The question is raised about how we ensure that Australia's horticultural industries are able to maintain access to a broad range of effective crop protection products and techniques that can be used safely, while at the same time guaranteeing public health and environmental safety. It is to these future directions that the committee now turns.

Chapter 4

Alternatives to fenthion – chemicals and management methods

4.1 The following chapter considers the various chemicals and management techniques put forward as possible substitutes for fenthion, particularly in relation to the management of fruit fly. The chapter also outlines stakeholders' views regarding the effectiveness and sustainability of the proposed alternatives.

4.2 This chapter then outlines stakeholders' suggestions on potential transition arrangements should fenthion be banned as well as stakeholders' views regarding the use of Area Wide Management (AWM) techniques, Sterile Insect Technology (SIT) and the implementation of the National Fruit Fly Strategy (NFFS) as future methods for fruit fly control.

Finding a chemical alternative for fenthion

4.3 The committee was told that one of the horticultural industry's biggest concerns is that there is currently no other chemical as effective as fenthion for the control of fruit fly.

4.4 Over recent years, a number of possible chemicals and fruit fly management methods have been put forward by various agencies and sections of the industry. The committee received evidence on some of these. Stakeholders indicated that new chemicals have proven useful in some areas of the country, but they have been less successful in others. While opinions varied about how much the industry will benefit from these new options, one thing stakeholders were able to agree on is that there is no 'silver bullet' solution when it comes to replacing fenthion.

Clothianidin

4.5 In September 2013, the APVMA issued a permit for the use of clothianidin to control fruit fly in pomefruit and stonefruit. Clothianidin had previously been registered for use by apple and pear growers for the control of Codling Moth, Wooly Apple Aphid, longtailed mealybug and Tuber mealybug.[1]

4.6 It was submitted that the use of clothianidin against fruit fly is new to Australia and, as such, there is a shortage of information on the likely residues of the product left on fruit after its use. This has implications for apples and pears grown in fruit fly endemic areas, particularly those being grown for export markets. APAL argued that the implications are significant, given that the MRL for clothianidin acceptable to importing countries range from 0.3 mg/kg to 1 mg/kg which is well below the temporary Australian limit (currently set at 2 mg/kg for apples and pears). [2]

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1 Apple and Pear Australia Limited, *Submission* 4, [p. 3].

2 Apple and Pear Australia Limited, *Submission* 4, [p. 4].

4.7 LCA also suggested that considerably more testing needed to be done in relation to the effectiveness of clothianidin. Specifically, LCA argued for in-orchard testing during seasons of high rainfall, when its effectiveness is currently unknown.[3]

4.8 The NSW Farmers' Association indicated that feedback provided by members had been that alternatives such as clothianidin were more expensive than traditional controls, without having the same level of impact.[4]

4.9 The committee received evidence that there were other drawbacks to using clothianidin as a cover spray. For example, APAL argued that depending on the pest pressure during the season, the product is unlikely to be effective on its own. It was also argued that clothianidin has a potential for resistance build up, which APAL suggested made it a chemical best used as one part of an AWM strategy including trap monitoring, baiting, lure and kill traps as well as the maintenance of orchard hygiene.[5]

4.10 Evidence was also provided which suggested that clothianidin can be dangerous to bees. It was argued that the chemical can kill bees foraging in a crop, or in hives over which the product has been sprayed, or that the product has reached by spray-drift. It was argued that, in the short-term, this can be managed with appropriate application and ensuring that crops are not sprayed during the 'pollination window'.

4.11 However, it was argued that in the long term, the availability of neonicotinoids such as clothianidin is in doubt. APAL cited a 2013 paper from the European Food Safety Authority (EFSA)[6] which stated that neonicotinoids, including clothianidin, pose an unacceptably high risk to bees.

4.12 APAL argued that:

> Whilst [the EFSA] concerns related primarily to a perceived high acute risk to honey bees arising from exposure via dust drift for the seed treatment uses in maize, oilseed rape and cereals, the use of such chemicals within horticulture is likely to be re-assessed.[7]

Maldison and Trichlorfon

4.13 Grower Rod Thomson told the committee that trichlorfon – an insecticide with an existing registration against Queensland fruit fly (QFF) in stonefruit – has been shown to have 'knockdown only on adult QFF with only one day residual control and no effect on laid eggs'.[8] Mr Thomson argued, therefore, that:

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3 Low Chill Australia Inc., *Submission 22*, [p. 4].

4 NSW Farmers' Association, *Submission 26*, p. 10.

5 Apple and Pear Australia Limited, *Submission* 4, [p. 3].

6 European Food Safety Authority, *Conclusion on the peer review of the pesticide risk assessment for bees for the active substance clothianidin*, EFSA Journal 11(1), 16 January 2013, cited in Apple and Pear Australia Limited, *Submission* 4, [p. 3].

7 Apple and Pear Australia Limited, *Submission* 4, [p. 3].

8 Mr Rod Thomson, *Submission 3*, p. 3.

> This makes this insecticide virtually useless in commercial orchard circumstances and this result is in line with grower experience.[9]

4.14 APAL argued that the idea of broad spectrum chemicals is becoming unpopular and, as a result, most western countries are de-registering oganophosphates – including maldison and trichlorfon.[10]

4.15 Similarly, Mr Mark Napper told the committee that whilst the APVMA refers to maldison and triclorforn as possible alternatives to fenthion, in his experience they are 'neither effective nor viable'. Mr Napper also noted that, notwithstanding its level of effectiveness, neither chemical represents a long-term, viable option because the APVMA has triclorforn on its review list, and maldison is currently under review.[11]

Bait sprays

4.16 Bait sprays – such as spinosad and spinetoram – are permitted for use as insecticides in bait sprays and are generally applied as part of a systems approach such as AWM.

4.17 The committee was told, however, that bait spraying can fail – particularly with crops that are highly susceptible to fruit fly attack.[12] APAL also noted that bait sprays do not provide a practical solution, given that baits need to be applied regularly – often weekly – and more often if it rains, or if overhead irrigation is used – which is a common practice in apple and pear production.[13]

4.18 On the other hand, DOIG submitted that there is considerable evidence, produced over many decades, to indicate that Medfly can be totally controlled using integrated baiting schemes. DOIG argued that:

> Many local shires have moved from high infestations to virtually zero infestations in very short periods by implementing a comprehensive baiting procedure. These schemes invariably fail because of dissention within the community over cost sharing or property participation. They do not fail because the procedure in ineffective.[14]

4.19 Nannup Fresh Fruit Pty Ltd indicated that the major benefit of baiting is that they do not bait the fruit trees they plan to harvest within four weeks. It was noted that this, combined with the fact that baiting does not require the spraying of the whole tree (but only a small area of leaves on the tree) means that the 'chances of having residue found on the fruit is very low and much safer for consumers'.[15]

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9 Mr Rod Thomson, *Submission 3*, p. 3.

10 Apple and Pear Australia Limited, *Submission* 4, [p. 2].

11 Mr Mark Napper, *Submission 21*, [p. 4].

12 Apple and Pear Australia Limited, *Submission* 4, [p. 2].

13 Apple and Pear Australia Limited, *Submission* 4, [p. 2].

14 Donnybrook Orchard Improvement Group, *Submission 8*, [p. 2].

15 Nannup Fresh Fruit Pty Ltd, *Submission 7*, [pp 2-3].

Minor use programs

4.20 CropLife Australia pointed to the Government's recent commitment to allocating $8 million to a minor use and specialty crops program, and noted that it has, for some time, advocated for the introduction of 'an appropriately targeted, moderately funded minor use program in Australia'. It was submitted that this type of program would 'enable the introduction of significantly more tools to assist in the control of weeds, diseases and pests, including fruit fly', and has the potential to safeguard Australian agriculture by increasing its productivity and diversity.[16]

Finding non-chemical alternatives for fenthion

Lure and kill devices

4.21 Lure and kill (mass trapping) devices are widely used, as part of a systems approach, by apple and pear growers. The devices are designed to target newly-emerged adult flies before they become sexually mature, thereby preventing egg-laying. Therefore, for these types of devices to be effective, they need to be installed in sufficient density, over a wide area. APAL noted that 'lure and kill devices are never adequate as the sole means of control under medium to high infestation pressure and are generally combined with bait spraying'.[17]

4.22 New South Wales Stone fruit growers TJ and KJ Wilson indicated that, in 2013, with the changes to the use of fenthion, they had chosen to use alternative control methods – including trapping and baiting. They told the committee that despite their orchard being isolated from other orchards (decreasing the infection pressure) their decision '…was only partially successful and resulted in big losses which are unsustainable'.[18]

Irradiation

4.23 Grower Mark Napper noted that irradiation is an 'effective post-harvest treatment that is slowly gaining market acceptance'. However, he also noted that for irradiation to become an effective management technique, effective in-orchard management practices need to be developed. It was argued that time is needed to develop in-orchard systems and appropriate consumer education on irradiated products.[19]

Sterile Insect Technology

4.24 APAL submitted that in the longer term, greater effort needs to be put into developing additional management tools to control fruit flies. It argued that the recent

16 CropLife Australia, *Submission 13*, p. 3.

17 Apple and Pear Australia Limited, *Submission* 4, [pp 2-3].

18 TJ and KJ Wilson, *Submission 1*, [p. 2].

19 Mr Mark Napper, *Submission 21*, [p. 4]. See also Growcom, *Submission 19*, p. 8.

announcement by the South Australian Government of a $3 million investment in a SIT facility in Port Augusta for QFF 'goes some way toward addressing the issue'.[20]

4.25 Mr Will Zacharin, representing PIRSA, told the committee that the investment will support a $21 million research and development consortium in partnership with the CSIRO, HAL, the New South Wales Department of Primary Industries and Plant and Food Research Australia to develop a male-only line of sterile QFF. Mr Zacharin also noted that:

> SIT is used in many countries for the control of Mediterranean fruit fly. The national R&D consortium is confident that a sterile male-only Q-fly can be achieved and propagated for commercial release over the next five or so years. SIT provides the best outcome for the produce, avoids chemical resistance, can be used in sensitive and urban environments, does not impact on pollinators and supports the increasing use of beneficial insects that are used to control other pests in the horticulture industry around Australia. So South Australia would encourage and welcome all interested parties to support and collaborate on this national SIT program, as it is one of the most promising strategies for managing fruit fly into the future.[21]

4.26 APAL expressed support for industry being involved in this initiative by redirecting Research and Development (R&D) levy funds 'to support the research that will be undertaken within that facility to breed sterile insects and understand the most effective release mechanisms'.[22] At the same time, APAL stressed that a fair, equitable and cost effective system – which will allow growers and governments to purchase the sterile flies for fruit fly management – needs to be developed.[23]

4.27 The Horticulture Coalition of SA also raised SIT as a tool that could be used as part of a management program. The industry body noted that SIT has been 'shown to be successful in managing outbreaks of Fruit Fly in South Australia and is used as a technique by overseas countries with a high degree of success'.[24]

4.28 The Horticulture Coalition of SA expressed concern, however at the 'lack of a national approach to SIT'.[25] It was noted, for example, that the New South Wales and Western Australian state governments are in the process of withdrawing funds to maintain sterile fly production. It was also noted, with some concern, that while the South Australian government (with the support of HAL and some commercial partners) has recently announced the development of a SIT facility in South Australia, the facility is likely to take many years to reach full operation.

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20 Apple and Pear Australia Limited, *Submission* 4, [p. 5].

21 Mr Will Zacharin, Biosecurity SA, Department of Primary Industries and Regions South Australia, *Committee Hansard*, 16 April 2014, p. 39.

22 Apple and Pear Australia Limited, *Submission* 4, [p. 5].

23 Apple and Pear Australia Limited, *Submission* 4, [p. 5].

24 Horticulture Coalition of SA Inc., *Submission 11*, [p. 3].

25 Horticulture Coalition of SA Inc., *Submission 11*, [p. 3].

4.29 Citrus Australia (SA) Chairman, Mr Con Poulos, was positive about SIT as a developing technology, and replied positively when asked whether SIT is something that the horticulture industry should be giving serious consideration to:

> **Mr Poulos:** Yes, absolutely. It is going to be a key tool in the future. It is one of the most successful ways to get rid of flies in regions. The technology can be used on both flies and I think the technology, once it is developed properly, can be used on other insects as well.
>
> **Senator Gallacher:** Has it been successful anywhere else in the world?
>
> **Mr Poulos:** It has been successful overseas, absolutely. In America they have eradicated, I think, the Mexican fruit fly out of the entire states. The population was present for over 100 years. It has been used on other insects – on a certain type of moth in New Zealand and it was eradicated. This is not just about suppressing populations – initially it is – but the purpose is to eradicate these things out of regions. Our government in South Australia is committing to building this facility and then looking for funding and partners to help make this a successful venture. This facility has the potential to breed 50 million flies a week, which would put a huge dent in populations in growing regions. I think it is the key tool for the future in eradication.[26]

4.30 Mr Poulos acknowledged that the technology is a longer-term proposition – the facility may take five years to get up and running. However, he argued that this type of facility should be replicated in every major growing region or state around Australia – 'every state should have a facility like this set up to help us fight' fruit fly.[27]

4.31 The South Australian Fresh Fruit Growers Association (SAFFGA) supported Mr Poulos' view, and stressed that the Association believes that SIT is the most effective solution to fruit fly into the future. Executive Officer, Mr Tim Greiger told the committee that whilst he understood some countries – including the United States and Israel – had had success with regard to Medfly, the technology had not yet been refined in relation to QFF. He noted however that, there is research and study being undertaken which will make it possible to use SIT to control QFF. SAFFGA commended the state government for taking the initiative to establish a SIT facility in South Australia and described it as a major first step.[28]

Area wide management

4.32 APAL told the committee that successful AWM requires cooperation between commercial producers, backyard growers and local government. APAL argued that

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26 Mr Con Poulos, Citrus Australia (SA), *Committee Hansard*, 16 April 2014, p. 6.

27 Mr Con Poulos, Citrus Australia (SA), *Committee Hansard*, 16 April 2014, p. 7.

28 Mr Tim Grieger, South Australian Fresh Fruit Growers Association, *Committee Hansard*, 16 April 2014, p. 9.

this is often difficult to achieve in apple and pear growing regions 'which are located around urban fringes or near large regional centres'.[29]

4.33 APAL also acknowledged, however that in the short and medium term, greater awareness of AWM systems is required. The group also supported additional funds being made available to improve the level of awareness, not only amongst growers, but with local and state governments.[30]

4.34 The submission provided by LCA noted that, as part of its role, it had recently held three field days in which AWM systems were introduced to growers. These field days were then followed up with field days at orchards where growers had started to use AWM techniques. LCA indicated that:

> As a result of these field days our growers used a combination of AWM and fenthion as per the revised protocols. Armed with these tools growers felt some optimism going into the season. Results were mixed. Some growers were successful others were not with some experiencing catastrophic results from fruit fly damage.[31]

4.35 Nannup Fresh Fruit Pty Ltd submitted that it had been using AWM for control of fruit fly for well over ten years with very good results. It was noted that AWM requires a regular baiting program be carried out throughout the fruiting season and that monitoring and spraying of likely host species are carried out at times when the orchard is not in production. It was also acknowledged that AWM also requires growers be proactive 'by arranging (sometimes at their own cost) for the fly to be controlled on nearby hobby blocks or trees removed if the owner agrees'.[32]

4.36 The committee notes that during its site visits to orchards in the Perth Hills, producers demonstrated and explained the use of AWM techniques, which they had been using for some time. The committee was told by several producers that AWM was proving very effective. However, producers also noted that, over time, they have refined their management techniques and would continue to do so as new information becomes available.

Responsibility for finding an alternative to fenthion

4.37 The question of responsibility for finding a chemical which would provide an appropriate alternative to fenthion was one that produced various conflicting responses. AUSVEG argued that pursuit of an alternative was a government responsibility. The peak industry body described the level of engagement in the APVMA's fenthion review by government agencies (both federal and state) as 'weak'. AUSVEG also noted that there had been a lack of 'government involvement in helping

29 Apple and Pear Australia Limited, *Submission* 4, [p. 2].

30 Apple and Pear Australia Limited, *Submission* 4, [p. 5].

31 Low Chill Australia Inc., *Submission 22*, [p. 4].

32 Nannup Fresh Fruit Pty Ltd, *Submission 7*, [p. 2].

to identify and drive the research needed into alternative options and technologies', meaning that:[33]

> Industries have essentially been left to seek advice and determine how best to deal with the review and identify and fill the resulting pest management gaps themselves. Those industries with the resources have been in a position to initiate funded research. Those without the requisite capacity, unfortunately, have not.[34]

4.38 Summerfruit Australia also argued that, if the industry was going to survive, it would need assistance in finding alternatives to both dimethoate and fenthion:

> The Australian Summerfruit Industry is rapidly declining due to the lack of chemicals like Dimethoate and Fenthion. Immediate support to assist the industry in either regaining access to these chemicals OR the availability of new chemicals and/or effective alternative treatments is essential to assist in maintaining and then growing the Australian Summerfruit Industry.[35]

4.39 New South Wales stonefruit growers TJ and KJ Wilson argued that the federal government had responsibility to provide the funds required 'to test practical and effective alternatives, including alternate regimes for the continued use of Fenthion'. They also recommended that:

> … in future no changes to the use of chemicals are introduced without practical and effective alternatives being established.[36]

4.40 The APVMA told the committee that its primary role was as a regulator and it has no mandate to get involved in researching or providing advice on alternative chemicals. The APVMA argued that when it comes to seeking an alternative to chemicals such as fenthion:

> It is up to chemical companies and individuals to identify a need and develop a suitable product for market. Alternatively, grower associations may identify gaps in the market and seek permits for existing products or new registrations through chemical companies. Industry bodies, state authorities or other government agencies may assist by researching alternatives to meet identified needs and assist in any adjustment requirements as a result of any restrictions placed on chemical use by the APVMA.[37]

4.41 APAL submitted that it understands that the APVMA's role is that of a regulator, and it is not 'currently required to find or recommend alternative products

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33 AUSVEG, *Submission 14*, p. 3.

34 AUSVEG, *Submission 14*, p. 3.

35 Summerfruit Australia, *Submission 9*, [p. 8].

36 TJ and KJ Wilson, *Submission 1*, [p. 3].

37 Australian Pesticides and Veterinary Medicines Authority, *Submission 23*, p. 2.

for growers to use'.[38] APAL argued, however, that whilst it supports this position, it is of the opinion that:

> … the APVMA or relevant State and Federal agencies should provide greater "early insights" into its likely decisions to enable industry to liaise with chemical companies to meet market needs.[39]

4.42 However, Queensland DAFF made the point that there have been concerns about the use of OPs such as fenthion and dimethoate since the early 1990's. It was also noted, that by the late 1990's, there were predictions being made about the outcomes of dietary risk assessment reviews – with suggestions that the results would have an impact on both market access arrangements and the management of fruit flies generally. The department argued that despite communication with peak industry bodies, the message that industries would have to find other solutions to fruit fly control – particularly for commodities with edible peels – was initially not taken on-board by potentially affected industries.[40]

4.43 Queensland DAFF argued that:

> There was an expectation by many industries that the Governments of Australia would need to invest in the solutions on behalf of industries. However, the general view of the Governments of Australia was that the industries themselves needed to invest in solutions. The issue was significantly compounded by the lack of levy structures and membership appropriate peak bodies across horticulture.[41]

4.44 Queensland DAFF went on to suggest that it was not until around 2010 that most industries accepted ownership of the problem and started to collect residue and efficacy data to support their current uses of fenthion and dimethoate for uses on commodities with inedible peel.[42]

4.45 The APVMA also noted, that while it had made clear from the mid-2000's that fenthion was under review and that industry should be working toward finding alternatives:

> …. I know that most industries did not do that, particularly around the tomatoes and capsicums, but the stone fruit were very slow. The industry…in general, was very slow to look for alternatives for fenthion.[43]

4.46 This evidence was supported by officers from the Department of Agriculture and Food, Western Australia (DAFWA). Mr John van Schagen, Director of Plant Biosecurity, noted that, for many years, industry had been involved in fruit fly

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38 Apple and Pear Australia Limited, *Submission* 4, [p. 6].

39 Apple and Pear Australia Limited, *Submission* 4, [p. 6].

40 Queensland Department of Agriculture, Fisheries and Forestry, *Submission 6*, p. 3.

41 Queensland Department of Agriculture, Fisheries and Forestry, *Submission 6*, p. 3.

42 Queensland Department of Agriculture, Fisheries and Forestry, *Submission 6*, p. 3.

43 Ms Kareena Arthy, Australian Pesticides and Veterinary Medicines Authority, *Committee Hansard*, Briefing on use of fenthion, 9 December 2013, p. 2.

management committees, working groups and national industry. It was argued therefore, that the issues surrounding fenthion should not have come as a surprise to the industry.[44]

4.47 Mr van Schagen also indicated that DAFWA had initially found it difficult to engage the industry in the issues of fruit fly management and research. He told the committee that:

> We had previously put in funding applications to do fruit fly research, but industry was not prepared to fund it at the time. Later on in the piece, when things became a bit more serious that was when some funding was made available.[45]

Transition period

4.48 Stakeholders' views varied considerably regarding the necessity for a transition period to allow for a phasing out of fenthion. Some stakeholders argued that the industry had been provided with sufficient warning regarding possible restrictions on fenthion and called for an immediate ban on its use.[46]

4.49 Nannup Fresh Fruit Pty Ltd submitted, for example, that the Western Australian state government had been involved in research and development activities – particularly in relation to the use of AWM for fruit fly management – since the mid-1990's. It was also noted that the state government's activities had been communicated to growers through field days, and that over the past two years a large amount of time and effort had been put into helping growers transition from cover spraying for fruit fly.[47]

4.50 Nannup Fresh Fruit argued that it is time the registration for fenthion be removed; bringing Australia into line with its major trading partners, and protecting the industry's image from chemical residue findings.[48]

4.51 A number of stakeholders submitted the opposite argument, and stressed the need for transition period, to allow Australia's horticulture industry to adjust to the removal of fenthion and new management techniques.[49]

4.52 The Board of Summerfruit Australia told the committee that, from the time it had become apparent that the use of chemicals such as fenthion and dimethoate were likely to be restricted, research into alternatives had commenced. Specifically, it was

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44 Mr John van Schagen, Plant Biosecurity, Department of Agriculture and Food, Western Australia, *Committee Hansard*, 3 February 2014, p. 18.

45 Mr John van Schagen, Plant Biosecurity, Department of Agriculture and Food, Western Australia, *Committee Hansard*, 3 February 2014, p. 18.

46 Nannup Fresh Fruit Pty Ltd, *Submission 7,* [p. 1]. See also, Mr Will Zacharin, Biosecurity SA, Department of Primary Industries and Regions South Australia, *Committee Hansard*, 16 April 2014, p. 42,

47 Nannup Fresh Fruit Pty Ltd, *Submission 7,* [p. 1].

48 Nannup Fresh Fruit Pty Ltd, *Submission 7,* [p. 2].

49 See, for example, AUSVEG, *Submission 14* and Venus Citrus, *Submission 28*, p. 1.

noted that Summerfuit Australia, in partnership with HAL and various government and non-government research organisations made a substantial investment in fruit fly research.[50]

4.53 It was submitted that, as a result of this research work, some new control options have been identified 'but in such a short space of time their effectiveness in commercial situation across the many different growing regions and conditions in Australia has not been properly assessed'.[51]

4.54 It is against this background of ongoing research into finding alternative, viable and sustainable fruit fly control options, that a number of growers and industry organisations (including Summerfruit Australia) suggested that consideration be given to retaining fenthion as a control option for fruit flies in Australia 'in the interim period until suitable alternative control measures become available'.[52]

4.55 In representing HOIG, Mr Brett DelSimone confirmed that the group has accepted the fact that fenthion is not going to be able to be used into the future.[53] At the same time, however, HOIG indicated that the group supports the gradual phasing out of its use:

> **Senator Back:** Mr DelSimone, you mentioned in your opening statement that, in a perfect world, if fenthion is going to be phased out you want it phased out, period, from the APVMA. Can you tell us what that length of time would be from the point of view of you and your associates?
>
> **Mr DelSimone:** Speaking from the precedent that has been set from Europe and New Zealand: they were given a two-year phase out. In some crops it was even longer, because the phase-out was tied to the rider that a successful replacement had to be in place. So there were more years involved. There is also a precedent from the regulator having recently granted a two-year phase out for another chemical. On top of that they have given dimethylate a phase-out until October this year as well. So there are not only worldwide precedents for this; there are national precedence [sic]. To be honest, I think three years would be a fair phase-out period.[54]

4.56 Evidence suggests that even those areas which are generally fruit fly free – and not users of fenthion – have a vested interest in ensuring that the states that do use

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50 Board of Summerfruit Australia, *Submission 10*, [p. 1].

51 Board of Summerfruit Australia, *Submission 10*, [p. 2].

52 Board of Summerfruit Australia, *Submission 10*, [p. 3]. See also, Mr Rod Thomson, *Submission 3*, Horticulture Coalition of SA, *Submission 11*, and Mr Tim Grieger, South Australian Fresh Fruit Growers Association, *Committee Hansard*, 16 April 2014, p. 8.

53 Mr Brett DelSimone, Hills Orchard Improvement Group, *Committee Hansard*, 3 February 2014, p. 22.

54 Mr Brett DelSimone, Hills Orchard Improvement Group, *Committee Hansard*, 3 February 2014, p. 23.

the product are able to control the pest.[55] For example, Mr Trevor Ranford, Chair of the Horticultural Coalition of South Australia, told the committee that:

> What is of concern is the fact that those chemicals are no longer available for our interstate counterparts, which means they have less in their armoury to control the pest, which puts South Australia under increased pressure of high populations within those particular states.[56]

4.57 PIRSA also indicated that it believes that the combination of losing fenthion as a phytosanitary treatment for a number of commodities, limited alternative treatments and the spread of QFF in New South Wales and Victoria, does place South Australia at a greater risk of receiving fruit fly infected produce. At the same time, however, PIRSA indicated that it:

> … also considers the spread of Q-fly, combined with limited government or industry funding for effective mitigation or control measures, is a far greater threat than the loss of fenthion itself.[57]

4.58 The committee understands that when a decision is made to cancel a chemical (active ingredient) chemical product or product label, there are transition – or 'phase out periods' that may apply. The committee was informed that Section 45 of the *Agricultural and Veterinary Chemicals Code Act 1994* (the Agvet Code) allows a maximum period of 12 months for a 'holder or person to possess, have custody of, supply or use a product after it has been cancelled'.[58] It is also noted that these sections of the Agvet Code do not allow any 'manufacture or importation of products after the date of cancellation'.[59]

4.59 The APVMA indicated that the type of issues that are taken into consideration when deciding whether to allow a phase out period include:

- whether any uses remain as an outcome of the review;
- any likely adverse effects from the continued use of the product/s;

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55 See, for example, Mr Con Poulos, Citrus Australia (SA), *Committee Hansard,* 16 April 2014, p. 1, and Mr Tim Grieger, South Australian Fresh Fruit Growers Association, *Committee Hansard,* 16 April 2014, p. 8,

56 Mr Trevor Ranford, Horticulture Coalition of South Australia Inc., *Committee Hansard*, 16 April 2014, p. 24.

57 Mr Will Zacharin, Biosecurity SA, Department of Primary Industries and Regions South Australia, *Committee Hansard*, 16 April 2014, p. 38.

58 Additional Information, Australian Pesticides and Veterinary Medicines Authority, response to request for advice from the RRAT References Committee, correspondence dated 21 July 2014, p. 3.

59 Additional Information, Australian Pesticides and Veterinary Medicines Authority, response to request for advice from the RRAT References Committee, correspondence dated 21 July 2014, p. 3.

- information from state and territory regulators about control of use difficulties;
- any potential impacts on trade and produce sold for export;
- availability and stocks of product in the marketplace (or with individual users); and
- issues associated with recall of products.[60]

4.60 The APVMA also told the committee that, in developing new instructions for use, various 'conditions of use' may be imposed. These conditions could potentially include restricted access and use of products, additional record-keeping requirements, specific monitoring requirements; and any other issues the Authority considers necessary to manage identified risks during such a phase out.[61]

Progress in identifying alternatives

4.61 At a recent Budget Estimates hearing, the Rural and Regional Affairs and Transport Legislation Committee (the Legislation committee) received evidence from the Australian Chief Plant Protection Officer, Dr Vanessa Findlay. Dr Findlay told the committee that the dimethoate and fenthion committee established by the government had conducted approximately 40 meetings between 2009 and 2013. The Legislation committee was advised that in May 2013, the committee established by the department decided that regular meetings were no longer required, and that it would meet on an 'as-needs' basis. Dr Findlay indicated that DA's 'commitment to resolving the issues around fenthion and the alternative approaches that can be put in place is ongoing'.[62]

4.62 The Legislation committee was told that in responding to the restrictions on fenthion, the Western Australian government has been undertaking a range of activities – with a particular focus on AWM. Dr Findlay also reported some positive outcomes in terms of research:

> I think one of the most promising things that we have seen of late is the research that has come out of the Jarrahdale region, where they are undertaking a comparison of bait spraying and cover spraying. It is looking like bait spraying is much more effective than cover spraying, which is the use of fenthion as a cover spray. So, there is some promising research

60 Additional Information, Australian Pesticides and Veterinary Medicines Authority, response to request for advice from the RRAT References Committee, correspondence dated 21 July 2014, p. 3.

61 Additional Information, Australian Pesticides and Veterinary Medicines Authority, response to request for advice from the RRAT References Committee, correspondence dated 21 July 2014, p. 3.

62 Dr Vanessa Findlay, Department of Agriculture, Fisheries and Forestry, *Committee Hansard*, Rural and Regional Affairs and Transport Legislation Committee, Estimates, 28 May 2014, p. 58.

> coming out and some possible alternatives that will be close to as effective as fenthion.[63]

Abandoned orchards

4.63 The issue of abandoned orchards was raised numerous times throughout the inquiry. Submitters and witnesses stressed that, if AWM is to succeed, it is vital to find ways to deal with the problem of abandoned trees, quickly and effectively.

4.64 For example, even though the company was generally very supportive of the work undertaken by the Western Australian state government, Nannup Fresh Fruit Pty Ltd argued that:

> One failing of the WA state Government has been to not follow through on existing Legislation regarding the removal of neglected orchards whose owners will not carry out the necessary management. If this was to be funded and carried out it would greatly reduce the pressure to other commercial orchards in the area making control easier.[64]

4.65 Mr Con Poulos, Chair of CA (SA) noted that, as far as he was aware, there was no legislation in South Australia to force property owners to bulldoze an abandoned orchard. Mr Poulos argued that abandoned orchards create both a biosecurity hazard and a fire hazard, but unfortunately it is also one of those very difficult topics, and an issue that no-one really wants to take responsibility for.[65]

4.66 The District Council of Loxton Waikerie, represented by its Director, Mr Timothy Tol, noted that the Council had been looking at the issue of abandoned orchards – specifically in relation to biosecurity. Mr Tol told the committee that the Council had been working with the Country Fire Service (CFS) 'to try and tackle some of the issues with abandoned orchards through fire prevention legislation':

> There are more teeth in the legislation in that area. There will be a community meeting held in the Sunlands area, which is to the west of Waikerie at the bottom end of our district, to look at how we can deal with that because there are a lot of orchards and trees put up in mounds. It is a fire prevention issue. We will be looking at how we might be able to get the community to support us in sorting out some of those abandoned orchards. We can tackle that through fire prevention legislation, but I am not sure what we can do through any other means. It will certainly assist with the biosecurity side of things.[66]

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63 Dr Vanessa Findlay, Department of Agriculture, Fisheries and Forestry, *Committee Hansard*, Rural and Regional Affairs and Transport Legislation Committee, Estimates, 28 May 2014, p. 58.

64 Nannup Fresh Fruit Pty Ltd, *Submission 7,* [p. 2].

65 Mr Con Poulos, Citrus Australia (SA), *Committee Hansard*, 16 April 2014, p. 5.

66 Mr Timothy Tol, District Council of Loxton Waikerie, *Committee Hansard*, 16 April 2014, p. 14.

4.67 In response to questioning from the committee, Mr Tol indicated that he agreed there was a definite need for stronger (and more effective) legislative powers in relation to abandoned orchards and backyard trees:

> Firstly, I do believe a stronger legislative framework would assist. I guess from my point of view – and philosophically when I have had to deal with enforcement and regulatory types of issues – we try to take the softly approach first and work with people and not just come in with the expiation and the legislation. But I think we need to have that ability, if we do not get anywhere in trying to deal with people in a more amicable way than otherwise.[67]

4.68 The Horticulture Coalition of South Australia (HCSA) told the committee that, historically, abandoned orchards were covered by the department of agriculture through its legislation, but its role was specific to declared pests. HCSA confirmed that the only legislation they understood to exist is for the CFS, 'where it is a fire hazard, can come in and deal with it, but there is nothing currently in the legislation'. HCSA noted, that they had been 'talking with the department about reviewing the plant health legislation to try to bring that into their powers'. It was acknowledged, however, whilst the state department was receptive to the idea, 'it is a slow process changing legislation'.[68]

National Fruit Fly Strategy

4.69 The committee was told that for Australia's horticultural industry, 'fruit fly is a constant enemy'.[69] It was argued that this pest costs horticultural producers more than $150 million per year in eradication procedures, destroyed fruit, field control and quarantine treatments to access interstate and overseas markets.[70]

4.70 It was estimated that, to date, Horticulture Australia Ltd (HAL) has funded 73 in-field control R&D projects with a matched dollar value of $16.893 million. It was also noted that QFF and Medfly are two of the most destructive pests facing the horticultural industry (as well as the consumer) 'yet there is no coordinated plan to manage and ultimately eradicate this pest'.[71]

4.71 Summerfruit Australia submitted that Australia is lacking an active National Fruit Fly Action Plan that is owned and operated in a partnership between the Commonwealth and industry. It was noted that a National Fruit Fly Strategy (NFFS) had been developed by government and industry a number of years ago. However, in

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67 Mr Timothy Tol, District Council of Loxton Waikerie, *Committee Hansard*, 16 April 2014, p. 15.

68 Mr Trevor Ranford, Horticulture Coalition of South Australia Inc., *Committee Hansard*, 16 April 2014, p. 25.

69 Summerfruit Australia, *Submission 9*, Appendix A, [p. 1].

70 Summerfruit Australia, *Submission 9*, Appendix A, [p. 1].

71 Summerfruit Australia, *Submission 9*, [p. 3].

recent years, government had 'walked away from funding the strategy'[72] and industry just does not have the spare research and development funds to finance the strategy.

4.72 The problem of getting all major stakeholders involved in the implementation of the NFFS was raised with the Chair of CA (SA). Mr Poulos indicated that the NFFS was something that he and his organisation had been thinking about for some time – particularly the need to start by getting all industry bodies on board. Mr Poulos told the committee:

> The difficulty with that is what you have just mentioned – each region with a fruit fly issue has different issues to the next one. In Perth, they battle the Mediterranean fruit fly on the doorsteps of suburbs. We in the Riverland are quite isolated, so we have probably got the advantage where we can have what we do have now – an exclusion zone that protects the entire Riverland with roadblocks coming in to it. So, yes, every region has its difficulties.[73]

4.73 At the committee's hearing in Loxton, SAFFGA was asked whether the Association was prepared to put its support behind a national approach to fruit fly control. Executive Officer, Mr Tim Grieger, responded that:

> Certainly we would have input in terms of being part of a national forum to work together with industry as a whole and in partnership with government. We need to see partnerships being built to make this work. The industry is notorious for sticking to its little patch and looking after its own little corner. We need to get out of that and build true partnerships and teams to move forward.[74]

4.74 In terms of funding, SAFFGA confirmed that it would be prepared to commit industry levy funds on fruit fly. The Association also indicated that the levy could be used as a resource 'that would be there to deal with funding requirements for a program that would be implemented down the track for SIT control'.[75]

4.75 In response to questions from the committee about who should assume responsibility and take the leadership role in relation to the development and implementation of a national strategy, Mr Will Zacharin from PIRSA answered:

> I would say that is the role of the Commonwealth government.[76]

Progress toward the implementation of a national strategy

4.76 On 7 May 2014, the Commonwealth announced the commitment of $80,000 in new funding to go toward the coordination of the NFFS. It is proposed that this

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72 Summerfruit Australia, *Submission 9*, [p. 3].

73 Mr Con Poulos, Citrus Australia (SA), *Committee Hansard*, 16 April 2014, p. 4.

74 Mr Tim Grieger, South Australian Fresh Fruit Growers Association, *Committee Hansard*, 16 April 2014, p. 11.

75 Mr Tim Grieger, South Australian Fresh Fruit Growers Association, *Committee Hansard*, 16 April 2014, p. 11.

76 Mr Will Zacharin, Biosecurity SA, Department of Primary Industries and Regions South Australia, *Committee Hansard*, 16 April 2014, p. 41.

funding will be used initially, to fund an advisory committee which will undertake a review of the current NFFS. The strategy was originally released by the then Minister for Agriculture, Fisheries and Forestry, in 2008.[77]

4.77 In addition to the Commonwealth's contribution to the establishment of the advisory group, equal contributions were made by the states and territories and industry. The management and establishment of the advisory group was costed at approximately $200,000.[78]

4.78 Plant Health Australia (PHA) is the agency currently responsible for coordinating the government-industry partnership for plant biosecurity in Australia. PHA will now take responsibility for setting up a NFFS Advisory Committee. The committee, which will be formed shortly, will be made up of representatives from Commonwealth, state and industry organisations. The Advisory Committee will be involved in a review of the NFFS and in overseeing its implementation.[79]

4.79 At the Legislation committee's recent Estimates Hearings, Dr Findlay expanded on the proposed arrangements around the establishment of a national advisory committee in relation to fruit flies:

> The funding has been sought from industry, state and territory government and we have put together an advisory committee that is representative across the nation. We met for preliminary discussions on 22 May. Significant progress has been made there, including a process for nominating the chair and making sure we have got an appropriate process in place for identifying the industry contribution to that committee as well.[80]

4.80 The committee was advised that the types of issues the advisory committee will consider include:

- **a cost-benefit analysis** – whilst there have been a number of cost-benefit analyses undertaken in relation to fruit flies, it has not been looked at from a national perspective;
- **sterile insect technology** – whilst SIT does not represent an immediate solution, it proposed that it will become a primary management tools in the future;
- **impact of fruit flies on horticultural productivity**; and

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77 Media Release, The Hon. Barnaby Joyce, MP, Minister for Agriculture, *Getting fruit fly under control a national priority*, 7 May 2014.

78 Dr Vanessa Findlay, Department of Agriculture, Fisheries and Forestry, *Committee Hansard*, Rural and Regional Affairs and Transport Legislation Committee, Estimates, 28 May 2014, p. 61.

79 Media Release, The Hon. Barnaby Joyce, MP, Minister for Agriculture, *Getting fruit fly under control a national priority*, 7 May 2014.

80 Dr Vanessa Findlay, Department of Agriculture, Fisheries and Forestry, *Committee Hansard*, Rural and Regional Affairs and Transport Legislation Committee, Estimates, 28 May 2014, p. 58.

- **focused R&D spending –** there has been significant money spent on R&D – the advisory committee will look at the amount of money spent on research and development and work to identify national priorities and a coordination of efforts.

4.81 Dr Findlay also told the committee that agriculture ministers from across Australia had met in March 2014. The ministers had developed a proposal for a work plan and set some goals around what they wanted to achieve with regard to the coordination of a national plan on fruit fly management. It is proposed that the NFFS Advisory Committee will report to all Australia's agriculture ministers.[81]

4.82 Dr Findlay described the announcement of funding for the NFFS Advisory Committee as a 'significant step forward':[82]

> It allows us to look at fruit flies from a national perspective. One of the things I was mentioning before was that one of the big hurdles we faced was that fruit flies was being dealt with within jurisdictions and within regions and even within commodity groups, so we were not seeing the coordination across all of those things.
>
> The advisory committee, for the first time, brings together each of the jurisdictions, the Commonwealth government and industries and R&D providers as well to look at fruit flies from a national perspective. [83]

Committee comment

4.83 The committee notes that the use of fenthion is a subject about which stakeholders have very strong – and often opposing – views.

4.84 Without pre-empting the APVMA's final decision in relation to fenthion, the committee notes that it has seen no evidence suggesting that the APVMA is likely to reverse its position on the chemical's use. The committee recognises that the APVMA has found that fenthion has an adverse impact on human health, so its removal as an agvet chemical would appear close to inevitable.

4.85 The committee is aware that there is currently considerable disagreement regarding the level of impact the removal of fenthion will have on the horticultural industry – particularly in Western Australia. Some stakeholders have taken the view that an alternative to fenthion should be found prior to its removal. There are other groups of stakeholders who consider that orchardists have been aware of the

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81 Dr Vanessa Findlay, Department of Agriculture, Fisheries and Forestry, *Committee Hansard*, Rural and Regional Affairs and Transport Legislation Committee, Estimates, 28 May 2014, p. 58.

82 Dr Vanessa Findlay, Department of Agriculture, Fisheries and Forestry, *Committee Hansard*, Rural and Regional Affairs and Transport Legislation Committee, Estimates, 28 May 2014, p. 65.

83 Dr Vanessa Findlay, Department of Agriculture, Fisheries and Forestry, *Committee Hansard*, Rural and Regional Affairs and Transport Legislation Committee, Estimates, 28 May 2014, p. 65.

impending changes in relation to OPs (specifically fenthion) and they need to be prepared to adapt to the changing circumstances. These groups also support the implementation of cooperative control policies on their orchards and have been working with neighbouring orchards and local communities to manage fruit fly.

4.86 The committee notes that there is general agreement amongst stakeholders that there is no existing, effective, single-use, chemical alternative to fenthion. The committee suggests, however, that research currently being undertaken may see a move away from single-use chemicals toward bait sprays combined with AWM and other measures.

4.87 At the same time, the committee is aware that there may be a time in the future when circumstances require the use of a 'knock-down' chemical cover-spray such as fenthion. Whilst the committee notes that there have been some initial positive signs in this area, there is a clear requirement for more research and development to develop and refine possible alternatives.

4.88 The committee notes abandoned orchards – and unhygienic management practices in active orchards – are key issues that require addressing in regions where AWM is established or could be established. The committee further notes that there appears to be little in the way of legislated authority to compel landowners to manage orchards – abandoned or otherwise – hygienically to ensure they do not pose a biosecurity hazard, particularly with respect to fruit fly.

4.89 The committee notes that even those states which have limited problems with fruit fly, such as South Australia and Tasmania have a vested interest in the control of this pest, which causes significant damage and imposes an additional financial burden on Australia's horticultural industry every year.

4.90 The committee notes that the need for a transition period is an issue over which opinion is divided. The committee appreciates the view put by a number of industry players, who argued that the horticulture industry has been aware for some time that deregistration of fenthion was likely. The committee also notes that some sections of the industry have made significant preparations for that eventuality.

4.91 However, the committee also acknowledges the view of some stakeholders who expressed support for a transition period, arguing that it would provide Australia's horticultural industry with an opportunity to adjust to the removal of fenthion and properly plan for the implementation of new management techniques.

4.92 The committee recognises that the APVMA has assisted growers by issuing a number of permits allowing for restricted use of fenthion over a short period of time. Nonetheless, the committee notes that there are some sectors of the industry that are still not completely prepared for the removal of fenthion, and is mindful that this could impact on other growers and other sections of the industry. In this regard, the committee is particularly mindful of evidence received suggesting that even those growers in areas which are generally free of fruit fly (and are not currently users of fenthion) have a vested interest in ensuring that those states battling fruit fly have the means to control this pest. The committee accepts that, for example, the spread of

QFF in both New South Wales and Victoria places South Australia at a greater risk of fruit fly outbreak.

4.93 Based on the likelihood that the APVMA will, in the near future, move to cancel the chemical registration for fenthion, the committee therefore indicates its support for a transition period, which would allow for a phasing out of its use. However, the committee also believes that any transition period needs to be clearly defined – and include definitive timelines and a specific end date – so that stakeholders recognise that alternative fruit fly management techniques must be adopted without delay.

Recommendation 4

4.94 The committee recommends that the maximum twelve month transition period allowed under the *Agricultural and Veterinary Chemicals Code Act 1994* be initiated by the APVMA, that fenthion be permitted for sale during the first half of that period, and that the APVMA allow fenthion to be used during the full transition period, subject to appropriate 'conditions of use'.

4.95 The committee also supports the government's recent commitment to a National Fruit Fly Strategy. The committee sees the formation of a NFFS Advisory Committee as a positive first step toward a nationally focused approach to fruit fly management.

4.96 The committee will be taking a keen interest in the NFFS Advisory Committee and is looking forward to further announcements regarding its membership and the review process it has been appointed to undertake.

4.97 The committee is keen to see membership that is reflective of underlying regional focus. Whilst the committee views an enhanced national policy in relation to fruit fly as vital, it is mindful of the dangers of taking a one-size-fits-all approach in relation to the fruit fly pest. It is important that the differences that exist between states and regions are identified, but that these differences are used as a way for the various stakeholders to learn from one another and work cooperatively at a national level.

4.98 The committee believes that there are a number of issues that need to be addressed by the Advisory Committee. The committee agrees that the issues identified by the Department of Agriculture such as sterile insect technology, cost benefit analysis, impact on productivity and research and development funding, are important priorities.

4.99 The committee would also like to add to the Advisory Committee's list of priorities the importance of strategies to deal with stakeholders' concerns about abandoned orchards and to encourage community involvement, funding for local government to become more involved in fruit fly management and the possible value of minor use programs.

4.100 The committee will continue to take an interest in the development of the NFFS and Plant Health Australia and the Department of Agriculture's management of the process over the next 12-18 months. It is vital that at the end of that period there is a structure, a strategy and an implementation plan that is able to be moved forward.

4.101 The committee is conscious that the funding being provided to the NFFS Advisory Committee is not ongoing funding and that Plant Health Australia's role will be a very challenging one – particularly if Australia is going to have a sustainable and ongoing commitment to national fruit fly control.

Recommendation 5

4.102 The committee recommends that state and territory governments consider developing legislation which enables relevant authorities to compel landowners to manage their properties to an acceptable standard that does not pose a biosecurity risk to neighbouring properties and surrounding regions.

Recommendation 6

4.103 The committee recommends that, when undertaking its review of the National Fruit Fly Strategy, the Advisory Committee take into consideration the following important issues:

- **abandoned orchards;**
- **encouraging community involvement in fruit fly management;**
- **ways of providing funding for local government initiatives (in relation to fruit fly management); and**
- **the value of conducting research into minor use programs.**

Recommendation 7

4.104 The committee recommends that the findings of the National Fruit Fly Strategy Advisory Committee be considered by government in a timely fashion, to allow the implementation phase to go ahead without delay.

Recommendation 8

4.105 The committee recommends that, following the National Fruit Fly Strategy Advisory Committee's review, the Commonwealth Government provide adequate ongoing funding – and seek matching funds from states, territories and industry – to promote an immediate implementation of the Strategy.

Senator Glenn Sterle

Chair

Appendix 1

Submissions received

Submission Number	Submitter
1	Mr TJ and KJ Wilson
2	Mr Daniel Di Marco
3	Mr Rod Thomson
4	Apple and Pear Australia Limited
5	Tasmanian Farmers & Graziers Association
6	Queensland Department of Agriculture, Fisheries and Forestry
7	Nannup Fresh Fruit Pty Ltd
8	Donnybrook Orchard Improvement Group
9	Summerfruit Australia Ltd
10	Mr Andrew Finlay, Summerfruit Australia Ltd
11	Horticulture Coalition of SA Inc
12	Hills Orchard Improvement Group
13	CropLife Australia
14	AUSVEG
15	Department of Agriculture
16	Alliance for a Clean Environment
17	Food Standards Australia New Zealand
18	Mr Dick Lovegrove
19	Growcom
20	Mr Mark Wilkinson
21	Mr Mark Napper
22	Low Chill Australia Inc
23	Australian Pesticides and Veterinary Medicines Authority
24	Fruit West
25	Mr David Eyre
26	NSW Farmers' Association
27	CSIRO
28	Shire of Kalamunda
29	Citrus Australia – SA Region
30	Venus Citrus

Additional information received

- Received on 7 February 2014, from Mr Garrie Vincenti. Additional information.
- Received on 7 February 2014, from Mr Mark Wilkinson. Additional information.
- Received on 28 February 2014, from the Department of Agriculture and Food, Western Australia. Answer to Question taken on Notice on 3 February 2014.
- Received on 11 July 2014, from the Office of Chemical Safety. Answer to Question taken on Notice on 7 July 2014.
- Received on 14 July 2014, from the Australian Pesticides and Veterinary Medicines Authority. Answers to Questions taken on Notice on 7 July 2014.
- Received on 22 July 2014, from the Australian Pesticides and Veterinary Medicines Authority. Additional information.

TABLED DOCUMENTS

7 July 2014, Canberra, ACT:

- Tabled by Senator Back. Email – RE: Timeline for response to Senate Inquiry into the implications of the restriction on the use of Fenthion on Australia's horticultural industry

Appendix 2

Public hearings and witnesses

3 February 2014, Perth, WA

- McALPINE, Mr Graham, Executive Manager,
  Fruit West
- WILKINSON, Mr Mark, Chair, Fruit West Summerfruit Leadership Group, and Member, Fruit West Board
- HARDIE, Dr Darryl Charles, Senior Research Officer—Entomologist, Department of Agriculture and Food, Western Australia, and DAFWA Mediterranean Fruit Fly Response Coordinator
- VAN SCHAGEN, Mr John, Director, Plant Biosecurity,
  Department of Agriculture and Food, Western Australia
- DELSIMONE, Mr Brett, Spokesperson,
  Hills Orchard Improvement Group/Fruit Fly Action Group
- BYL, Ms Wilma, Secretary/Treasurer,
  Hills Orchard Improvement Group/Fruit Fly Action Group
- NIXON, Mr Grant,
  Private capacity
- STALLARD, Mr Geoff, Councillor,
  Kalamunda Shire Council

16 April 2014, Loxton, SA

- COSTI, Ms Maria, Office Manager,
  Venus Citrus
- GRIEGER, Mr Tim, Executive Officer,
  South Australian Fresh Fruit Growers Association
- KASSEBAUM, Mr John, Principal Policy Officer, Agricultural and Veterinary Chemicals, Biosecurity SA, Department of Primary Industries and Regions South Australia
- POULOS, Mr Con, Chairman,
  Citrus Australia (South Australia)
- RANFORD, Mr Trevor, Chair,
  Horticulture Coalition of South Australia Inc.
- SECOMB, Mr Nick, Manager, Plant Health Operations, Biosecurity SA, Department of Primary Industries and Regions South Australia
- TOL, Mr Timothy Paul, Director, Infrastructure Services,
  District Council of Loxton Waikerie

- WHETSTONE, Mr Tim, Member for Chaffey,
  South Australian Parliament
- ZACHARIN, Mr Will, Executive Director, Biosecurity SA,
  Department of Primary Industries and Regions South Australia

7 July 2014, Canberra, ACT

- ARTHY, Ms Kareena, Chief Executive Officer,
  Australian Pesticides and Veterinary Medicines Authority
- BARDEN, Mr Graeme, Assistant Secretary,
  Office of Chemical Safety, Department of Health
- BATT, Mr Stephen, Acting Director, Chemical Review Program,
  Office of Chemical Safety, Department of Health
- BHULA, Dr Raj, Executive Director Pesticides,
  Australian Pesticides and Veterinary Medicines Authority
- HARVEY, Mr Paul, Principal Regulatory Scientist,
  Office of Chemical Safety, Department of Health
- HEALY, Dr Marion, Executive Manager Risk Assessment,
  Food Standards Australia New Zealand
- O'MULLANE, Dr Matthew, Manager Chemical Review,
  Australian Pesticides and Veterinary Medicines Authority

Appendix 3
Australian Pesticides and Veterinary Medicines Authority
Chemical Review Process

The following is an overview of the stages of the APVMA's chemical review process.

Nomination	APVMA becomes aware of concerns about a chemical (active constituent), product and label and decides a review is warranted based on credible new scientific information available at the time.
Prioritisation	Review is prioritised based on urgency and nature of the concerns.
Scoping	A detailed outline is prepared about the reason(s) for the review and assessment components to be considered as part of the review (including toxicology, environmental impact, occupational health and safety, residues).
Data call-in	APVMA notifies chemical companies with active constituent approvals and registered products (registrants and approval holders) and asks them to submit data relevant to the scope of the review. APVMA also calls for public submissions which address the current usage of, or problems with, the continued registration of the chemical under review.
Assessment	All submissions and scientific data are evaluated by the APVMA and external advisory Australian Government agencies as appropriate. Depending on the concerns outlined in the scope of the review, these assessments commonly include toxicology, residues, occupational health and safety and environmental safety.
Draft Regulatory Measure	Following the assessment stage, the APVMA develops a draft regulatory approach to the chemical under review.
Consultation	The draft report and draft regulatory measure are released for public comment for up to three months.
Regulatory Decision	Based on evidence gathered during the assessment and consultation phases, the APVMA CEO makes the final decision about the future use of the chemical under review. Note that an interim regulatory decision may be approved if identified risks

	can be managed through modified instructions of use or if generation and evaluation of additional data may be required.
Implementation	Review participants are notified of the outcome and regulatory actions implemented. Outcomes of the review are published in the APVMA Gazette.