

## 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, Woolly Apple Aphid, longtailed mealybug and Tuber mealybug.<sup>1</sup>

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).<sup>2</sup>

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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.<sup>3</sup>

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.<sup>4</sup>

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.<sup>5</sup>

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)<sup>6</sup> 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.<sup>7</sup>

### ***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'.<sup>8</sup> 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.

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

4.14 APAL argued that the idea of broad spectrum chemicals is becoming unpopular and, as a result, most western countries are de-registering organophosphates – including malathion and trichlorfon.<sup>10</sup>

4.15 Similarly, Mr Mark Napper told the committee that whilst the APVMA refers to malathion and trichlorfon 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 trichlorfon on its review list, and malathion is currently under review.<sup>11</sup>

### ***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.<sup>12</sup> 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.<sup>13</sup>

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 dissension within the community over cost sharing or property participation. They do not fail because the procedure is ineffective.<sup>14</sup>

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'.<sup>15</sup>

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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.<sup>16</sup>

### **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'.<sup>17</sup>

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'.<sup>18</sup>

#### ***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.<sup>19</sup>

#### ***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

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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'.<sup>20</sup>

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.<sup>21</sup>

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'.<sup>22</sup> 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.<sup>23</sup>

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'.<sup>24</sup>

4.28 The Horticulture Coalition of SA expressed concern, however at the 'lack of a national approach to SIT'.<sup>25</sup> 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.<sup>26</sup>

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.<sup>27</sup>

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.<sup>28</sup>

### ***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'.<sup>29</sup>

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.<sup>30</sup>

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.<sup>31</sup>

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'.<sup>32</sup>

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

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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:<sup>33</sup>

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.<sup>34</sup>

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.<sup>35</sup>

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.<sup>36</sup>

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.<sup>37</sup>

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'.<sup>38</sup> 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.<sup>39</sup>

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.<sup>40</sup>

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.<sup>41</sup>

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.<sup>42</sup>

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.<sup>43</sup>

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.<sup>44</sup>

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.<sup>45</sup>

### **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.<sup>46</sup>

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.<sup>47</sup>

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.<sup>48</sup>

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.<sup>49</sup>

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 Summerfruit Australia, in partnership with HAL and various government and non-government research organisations made a substantial investment in fruit fly research.<sup>50</sup>

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'.<sup>51</sup>

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'.<sup>52</sup>

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.<sup>53</sup> 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.<sup>54</sup>

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.<sup>55</sup> 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.<sup>56</sup>

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.<sup>57</sup>

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'.<sup>58</sup> 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'.<sup>59</sup>

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.<sup>60</sup>

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.<sup>61</sup>

### **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'.<sup>62</sup>

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

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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.<sup>63</sup>

### **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.<sup>64</sup>

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.<sup>65</sup>

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.<sup>66</sup>

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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.<sup>67</sup>

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'.<sup>68</sup>

### **National Fruit Fly Strategy**

4.69 The committee was told that for Australia's horticultural industry, 'fruit fly is a constant enemy'.<sup>69</sup> 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.<sup>70</sup>

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'.<sup>71</sup>

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'<sup>72</sup> 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.<sup>73</sup>

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.<sup>74</sup>

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'.<sup>75</sup>

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.<sup>76</sup>

### **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.<sup>77</sup>

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.<sup>78</sup>

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.<sup>79</sup>

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.<sup>80</sup>

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.<sup>81</sup>

4.82 Dr Findlay described the announcement of funding for the NFFS Advisory Committee as a 'significant step forward':<sup>82</sup>

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.<sup>83</sup>

### **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**

