

Australian STONEFRUIT GROWER

*incorporating the
Low Chill Stonefruit Grower*

NOVEMBER 2015

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'Australian Stonefruit Grower' is the official publication of Summerfruit Australia Ltd & Low Chill Australia Inc. – the industry bodies representing the interests of Australian stone fruit growers.



Horticulture Innovation Australia

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Cover Photos –

The Cover Photos were supplied by Greg and Lynelle Foster and taken on Greg Nash's property. I trust I did them justice. Ed.

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Please Note:

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He died laughing

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Industry Information ...



From the Low Chill Australia Inc. Communications Manager

farewell ...

This 2015 November Issue of the *Australian Stonefruit Grower incorporating the Low Chill Stonefruit Grower* is the last publication I will be producing for the Australian Stonefruit Industry. The current three-year Communications Project will come to an end in 2015. I will not be seeking any further involvement with another Communications Project for the Australian Stone Fruit and the Low Chill Stone Fruit Industries. Further, at the end of this year, I will be standing down from the position of *Communications Manager* for Low Chill Australia Inc. – a position I have held since November 2006. For me, it is time to move on.

In December 2015 I will turn 66 and I'm tired. Over the past seven to eight years I have been plagued with ongoing health issues associated cancer and the treatment for same. Although the cancer has not returned, health issues have made working difficult at times. And one is not getting any younger.

At the end of this year I will be winding up my business and ceasing my close involvement with the Australian Horticultural Industry – an involvement that began in 1985 when I undertook to produce and edit a history publication project for the Bundaberg horticultural industry. A two-year project for the Bundaberg & District Fruit & Vegetable Association, this became the *pivotal point* that commenced my thirty-year engagement with those involved in Australia's vibrant horticultural industry.

What a journey it has been! Following the completion of the afore mentioned publication, I was invited to become *Secretary/Executive Officer* of the Bundaberg & District Fruit & Vegetable Growers Association – a position I held for seven years until standing down. Under the Bundaberg Association umbrella, I served as *Secretary* of the Bundaberg Region IPM Committee (the first regional IPM program in Australia) and *represented* the Bundaberg district horticultural industry on the Wide Bay Burnett Regional Employment & Training Board, the Bundaberg TAFE Horticultural Committee and the Central Queensland University – Bundaberg Committee. I also did a two-year stint as Secretary of the Bundaberg District Tree Crops Association.

Moving away from direct involvement with the horticultural industry, I focused on the publishing side of my business which also included horticulture so the association was maintained. I owned and published the quarterly publications the *Burnett Fruit & Vegetable Grower* and the *North Queensland Horticultural Journal*. I also included in my publication stable the monthly publication *AUF Fresh News* for the Australian United Fresh Fruit & Vegetable Association; the annual *National Pumps 'n' Irrigation* publication for the Irrigation Water Group; the quarterly publication *Mango Matters* for the Australian Mango Industry Association; *Talking Avocados* for Avocados Australia Limited; and produced *Integrated Pest Management – Vegetables and Tree Crop – Pest and Predator Guides* for the Childers & District Fruit & Vegetable Association – a spin off from the Bundaberg District IPM Program.

In 2001, I was approached to apply for the position of providing the *Secretariat* for the Australian United Fresh Fruit & Vegetable Association (AUF) – the umbrella organisation for the Australian Fresh Fruit & Vegetable Industry. Included with this position was providing the *Secretariat* for Fresh Produce Watch – the Australian Horticultural Industry's voice on chemical use, food safety, environmental & biotechnology issues and the *Secretariat* for the NSW Branch of the Australian United Fresh Fruit & Vegetable Association. The position was based at the body's National Office in the Sydney Markets.

During my five-year tenure with AUF, I was responsible for the organisation and running of the 'National Heart Tick' program for the Australian fresh fruit and vegetable industry; represented AUF on the *GSI Australian Fresh Produce Group* – formally EAN Australia; produced six *Australian Horticultural Yearbooks*; produced and edited the quarterly publication 'Horticulture Today' under the AUF Banner; and was Secretary/Organiser of AUF's *Horticulture 2003 Conference* held at Sydney's Olympic Park.



In 2006, I stood down from my positions as *Secretary to the Board* and *National Executive Officer* with AUF with the intention of sliding gradually into retirement. However, for a while the association continued through *membership* of the AUF National Training & Education Committee, *Deputy Chairman* of the AUF National Training & Education Committee and *Communications Manager* for AUF. It was during this period that the then President of Low Chill Australia Inc., Bill Hatton, approached me to become *Communications Manager* for LCA – a position that has developed over the past nine years to include the production of the *Australian Stonefruit Grower* for the whole Australian Stone Fruit Industry.

With the closure of my involvement with the Low Chill and Australian Stone Fruit Industries, it is not without some regret that I will be severing my thirty-year ties with the Australian Horticultural Industry. **It's been a long and exciting journey.** Although I come from a family sugar cane farm and cattle background (outside Bundaberg) I am not a farmer but today I can count many from the horticultural industry as my closest friends. **I have certainly had a well-rounded education in this industry.** I can honestly say that I have very much enjoyed my association with the Australian Stone Fruit Industry and my membership of Low Chill Australia Inc. will remain current until 30 June 2016.

In closing, I wish to thank the Australian Stone Fruit Industry and particularly Low Chill Australia Inc. for the opportunity to play a small role in this vibrant industry. I have more than enjoyed the experience and trust the *Free Trade Agreement* with China will be beneficial in providing a stepping stone for increased opportunities and financial rewards ahead. I wish all involved in the industry well for the future and also for the coming *Festive Season*. **Thank you for your support. It has been a privilege to have been given the opportunity to serve your industry and very much appreciated.**

Colin W Scotney – LCA *Communications Manager*





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To find out more about Summerfruit Australia Ltd, check out the website: www.summerfruit.com.au





Industry Report ...



REPORT from the Summerfruit Chairman



This season's stone fruit harvest is underway again and, unfortunately in some areas, it has been a tough start. Our thoughts are with those growers who have been hit hard with recent hail storms and the growers of the Northern Rivers region of New South Wales who have suffered some major crop losses with damage from Queensland fruit fly in this first season of the post *fenthion* era.

It is a stark reminder to all of us that an insect pest that previously had been relatively simple to control is going to present major challenges in eastern Australia in the immediate future, especially where weather conditions are favourable.

... little real progress made in bringing the protocol for direct access of Australian nectarines and plums into China to a conclusion.

The past three months have seen little real progress made in bringing the protocol for direct access of Australian nectarines and plums into China to a conclusion. Whilst as an industry our negotiations with China through the Department of Agriculture & Natural Resources will remain ongoing, we will continue with our activities and ensure that we remain focused on further developing the markets in other South East Asian countries where we currently have access.

In Canberra there has been a restructure within the Department of Agriculture where water resources have now been added to the agriculture portfolio. This restructure has seen **Senator Anne Ruston** appointed as the Assistant Minister and horticulture is now a part of her brief. Summerfruit Australia has previously developed a strong relationship with **Melinda Hashimoto** in Minister Joyce's office in her capacity as horticultural adviser and we look forward to establishing an equally strong relationship with Senator Ruston's office.

This edition of the *Australian Stonefruit Grower* marks the end of an era as **Col Scotney** retires from the role of editor of the magazine. Col has done a fantastic job over many years and will leave large shoes to be filled. On behalf of all Australian stonefruit growers, thank you for your excellent contribution to our industry over many years. I wish you all the very best in your retirement.

Andrew Finlay - Chairman



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Gordon Schultz
Bangalow's Best
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High Valley Orchard
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From the Low Chill Australia Inc. Committee





From the LCA President – Mark Napper ...

President's Report

As another low chill season draws to end, we again reflect on what might have been on a year of variability. Our season start was dry and warm, trees not going into full dormancy, production down, and then a wet finish with the consequent full juice but reduced sweetness.

Prices are down on last year across the range and our lateness being overlapped by high chill early market arrivals.

This season marked the end of *fenthion* finishing on 31 October. Again we are experiencing mixed results with replacement orchard fruit fly management programs. So we know there is no silver bullet replacing *fenthion* and a number of alternative programs are developing however it appears that it will be a few seasons before any real confidence can be achieved.



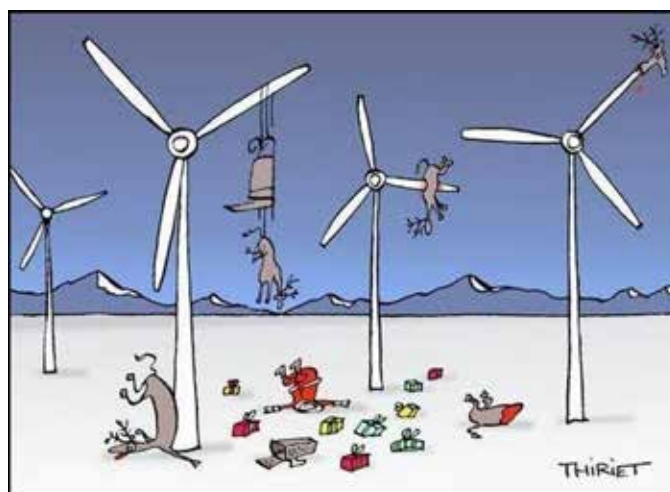
Many growers are experiencing major crop losses due to fruit fly. A workable solution is still a major issue for the industry. The lesson learnt is that we must never assume someone will be looking after our best interests and never think that no one would be 'silly enough' to make a decision that adversely affects an entire industry or that *'she'll be right mate'*. We must be ever vigilant that we unite and look beyond regional self-interests or pure laziness and ensure a **'fenthion event'** doesn't happen again.

Many growers are experiencing major crop losses due to fruit fly.

As 2015 will mark the end of the four decade reign of our 'friend', *fenthion*, it will also see the end of another great industry friend and supporter – **Col Scotney** as he announced his retirement at the end of the year. Col has been a tireless worker for not only our industry but the horticulture industry at large. He brought not only great knowledge, experience, professionalism and commitment to his role as Communications Officer but also great passion in serving our industry and doing whatever possible for us to achieve success. Col has experienced poor health in recent years which was a major factor in his decision to retire. Col, on behalf of the stone fruit industry and the larger horticulture industry we wish you and Kay a long, healthy and happy retirement. Thank you for the decades of faithful service.

As this is the last issue for the year I wish everyone a safe and relaxing Christmas and a healthy and successful 2016.

Mark Napper – President
Low Chill Australia Inc.





Industry Information ...

Beautiful?



→ IQS for the external quality detection

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NOTICE OF ANNUAL GENERAL MEETING

Notice is hereby given that the **Annual General Meeting** of **Low Chill Australia Inc.** will be held on **Friday, 11th December 2015** at the Bangalow Bowling Club, Bangalow, northern NSW, **commencing at 10am** (Eastern Summer Time). The Meeting will break for Lunch and is expected to finish at 3.30pm.

A Full Meeting Agenda will be forwarded by email to members and those associated with the Low Chill Stonefruit Industry preceding the Meeting and will be available on the Low Chill Australia Inc. website: www.lowchillaustralia.com.au.

Please **NOTE** that only **Financial Members** will be allowed to vote at the Annual General Meeting.

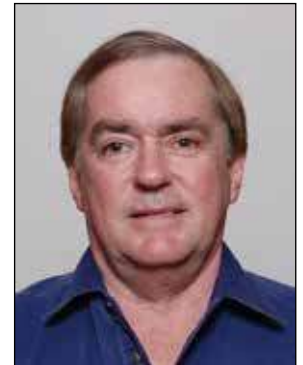
Mark Napper
LCA President

15 November 2015



Message from the CEO of Summerfruit ...

Still chasing Gold ...



Our Industry is looking for a good news story and we thought China would prevail. It is still some time away. Industry is export ready however there are delays from China to satisfy our DoAWR (Department of Agriculture and Water Resources) and our biosecurity measures, ALOP (Agreed Level of Protection). Frustrating as it is, Industry is steadfast that biosecurity is important for future sustainability in horticulture. Every measure is being undertaken to achieve a result for this current season.

An invitation has been issued to AQSIQ for them to visit and audit prospective export ready orchards, this may occur in the second week of December 2015. However, the timing will depend on China's willingness.

Minister Hon. Barnaby Joyce has visited **China** (12th November 2015) and met with his counterparts to exercise the importance of resolving these niggling biosecurity issues before counter seasonal trade can commence. His visit was also a goodwill visit for the pending ChaFTA agreement and similarly a brief visit to **Korea** and **Japan** for reinforcement of the recent FTA's with each of these countries.

Whilst on the topic of export destinations, **Vietnam** is slowly working towards a re-opening of its border's for stonefruit but unfortunately, not for this season. **Thailand** has access by ITCT (Intransit Cold Treatment) for stonefruit and an internal bureaucratic blockage for approvals of improved ITCT protocols and airfreight options including fumigation. Thankfully the Riverland region can enjoy unfettered access to Thailand due to PFA status. Tasmanian plums are also an option.

The Victorian DEDJTR is working very collaboratively with both **Thailand and Philippines Departments of Agriculture** to develop airfreight protocols as part of the agreed temperate fruits lead role agency DEDJTR has with DoAWR. The outsourcing of this research is very helpful and welcomed by Industry to see this State – Commonwealth collaboration and frees vital resources of the Commonwealth for other market access work.

There is a fair amount of Fruit Fly policy work and decision making at the moment. Importantly the *National Management Group* (NMG), which comprises of all governments and affected plant industries, has met and agreed that it is feasible to manage the exotic fruit fly threat posed by the Torres Strait region in Far North Queensland. A collaborative approach will be undertaken to eradicate *Oriental Fruit Fly*, *Melon Fly*, *New Guinea Fruit Fly* on an annual basis. This will be of considerable benefit to vulnerable industries. If not undertaken there would be considerable implications to our domestic and international trade.

Another welcoming sign is the Victorian Government ramping up its involvement by developing: *Managing Fruit Fly in Victoria: Action Plan 2015-2020* (the State wide Action Plan) investing \$1.3million and setting aside a further \$1million for the Horticultural fund which encourages regional associations and growers to engage in research projects to tackle fruit fly and other related projects for the betterment of horticulture – <http://www.premier.vic.gov.au/pulford-plants-seeds-for-horticulture-growth>.

The action areas are:

- 1) **Strengthening the co-ordination and collaboration of fruit fly management;**
- 2) **Improving the management of fruit fly; and**
- 3) **Enabling intrastate, interstate and international trade.**

The *Greater Sunraysia Pest Free Area Industry Development Committee* (IDC) a collaborative effort between **Citrus**, **Summerfruit** and **Table Grapes** has completed one round of trapping in the **Mildura** area and is currently completing the second round of trapping from **Robinvale to Barham**. The trapping is going sensationally well. The IDC are near completion of the first annual report to the Victorian parliament and hope to begin a series of grower meetings soon. IDC aim to have a series of AGM meetings in May to present an operational plan to growers that they can vote on to



approve. The three industries are working really well together and the fly numbers are greatly decreased on the same time last year. If growers are worried about a specific property or area they can contact the Stonefruit IDC representatives **Joelene Williams** sunfruit@bigpond.com or **Mike Tempini** mtempini@people.net.au.

The **National Fruit Fly Council** has been formed to work with growers and fruit fly management community groups across all states and territories to control *fruit fly* on a national scale.

Greg Fraser, *Executive Director* and CEO of **Plant Health Australia**, said that the Council will drive coordinated efforts across Australia to manage fruit fly to prevent them being a constraint to sustainable production or a barrier to trade and market access.

“This is an increasing challenge now some common chemical controls have been removed as **options for farmers**,” said **Greg**.

The four main focus areas for the Council are:

1. Fruit fly management systems – activities for prevention, detection, eradication, and management of fruit flies.
2. Market access – activities that will assist in securing entry conditions for horticultural produce into markets.
3. Legislation and regulation – ensuring that regulation and legislative controls for managing fruit flies are in harmony both across Australia and with international standards.
4. Research and development – ensuring that Australian R&D provides technically justifiable approaches and innovative solutions to meet the requirements of the three areas above.

The Council will consider the management of Mediterranean fruit fly (Medfly) and Queensland fruit fly (QFF). There will also be an emphasis on exotic fruit flies that could, if established, significantly impact the ability of industries to produce marketable fruit.

Funding for the Council will come from **Horticulture Innovation Australia** (Hort Innovation) and federal, state and territory governments. A full time national manager of fruit flies will be appointed to drive the Council’s agenda.

This role will have strong links to the two new national positions established by Hort Innovation, the SITplus Program Director and the QFF Area-Wide Management Coordinator. These three people will coordinate activities to ensure messages are delivered to all stakeholder groups.

The National Fruit Fly Council will take over the work of the National Fruit Fly Strategy Advisory Committee.

Two appointments made to lead QFF work

Hort Innovation has appointed two people to support and coordinate the work they fund to manage QFF. **Mr Dan Ryan** has been appointed as *Program Director* of the SITplus consortium that brings together experts from different research and government organisations working in sterile insect technology (SIT). He will work with stakeholders to communicate with existing and new research and commercial partners, and coordinate the different parts of Hort Innovation’s QFF work.



Dr Penny Measham has been appointed as the *QFF Area Wide Management (AWM) Coordinator* to prepare and support industry and councils for the eventual deployment of SIT QFF. She will be the primary two-way conduit between the project’s research team and stakeholders involved in QFF management for delivery of the regionally focused programs in horticultural production areas affected by endemic QFF or outbreaks.

Mr Dan Ryan (R) will lead work to coordinate the Sterile Insect Technology program (SITplus) consortium. Dr Penny Measham (L) will lead the work to implement an Area Wide Management for sterile QFF.

If successful, these Hort Innovation programs will see the delivery and production of a sterile male line of QFF and adoption of an associated AWM program. *Acknowledgement is given to APAL for this article inclusion.*



I encourage you to consider the use of DA meters, a business tax deduction \$4,950 for improving fruit quality.

<https://www.youtube.com/watch?v=gcy3hMnWUJI&>

<http://www.hin.com.au/projects/stonefruit-field-laboratory/da-meter>

I wish the very best of fortune and good luck for this already demanding summer stonefruit season. John Moore – CEO Summerfruit Australia Ltd.



For any further assistance, please contact - John Moore – CEO – Summerfruit Australia Ltd. – Ph: 02 6041 6641; +61 419 305 901; Mobile: 0419 305 901; Email: ceo@summerfruit.com.au ; Address: 8/452 Swift St., Albury NSW 2640



*Merry Christmas from the
Summerfruit Australia Ltd. Board*

MEDIA RELEASE

Assistant Minister for Agriculture and Water Resources

30 October 2015

New dedicated Federal minister for horticulture

There was a significant outcome for Australia’s horticultural industries following the change of leadership in the Australian Government with the appointment of the sector’s own dedicated minister, Assistant Minister for Agriculture and Water Resources Senator Anne Ruston.

Senator Ruston, based in one of Australia’s largest horticultural regions (South Australia’s Riverland), has extensive experience in the sector. A grower and irrigator herself before entering Parliament, Senator Ruston has been very active in the horticulture space, working closely with industry on issues such as biosecurity, export market access and levies for research and development.

In addition to horticulture, Senator Ruston will also have responsibility for the fisheries and forestry sectors and the wine industry, as well as a share of responsibilities for water reform in the Murray Darling Basin with Minister for Agriculture and Water Resources Barnaby Joyce.

“Horticulture in Australia is a diverse, dynamic and innovative industry with a bright future,” Senator Ruston said. “I’m very much looking forward to taking on this portfolio and working with the sector to maximise opportunities for growth, prosperity and sustainability.”



Research ...

Area Wide Management Program: effective at suppressing Queensland fruit fly populations after first year

Olivia Reynolds and Terry Osborne ...

This is the third article in a series on the Area-Wide Management (AWM) of the Queensland fruit fly, 'Qfly'. This AWM pilot program in the Stanthorpe region has just completed the first year of a three year Queensland fruit fly suppression program, with excellent evidence supporting the success of the program.

Despite only the first full year of trapping and suppression for five of the six stone fruit orchards, wild Qfly numbers are the lowest in the previous seven years of trapping data, with on average 0.016 flies/trap/day recorded. By international standards, this is at the lower end of the range we would expect in a suppression program.

The growers in the program used a combination of sanitation, bait sprays, male annihilation technique (MAT) and sterile flies to suppress fly numbers across their orchards.

Regular fruit monitoring played a key role in monitoring success of the program. We did not detect a single Qfly sting/egg/larvae in any of the orchards, with the exception of very low levels in two orchards at harvest. The largest orchard in the program detected no stings in fruit, nor were any wild flies trapped, in the orchard prior to a problem with sterile fly supply in late December 2014. This resulted in what appears to be only two or three wild females laying eggs in fruit in two sections of one orchard, with no more than 50 whole fruit (from a 60Ha plum orchard) detected by regular monitoring or pickers, reported as 'stung' by fruit fly. Infested whole fruit rarely had more than one Qfly larvae. It was identified that the other orchard which recorded larval fruit fly detections (unfortunately most of the infested stone fruit was inadvertently destroyed and we were unable to identify the species), had several Osage Orange (*Maclura pomifera*) trees, which were heavily infested with *B. tryoni*. These had not been removed in the sanitation process. These trees have now been removed. This was not a previously recorded host of Qfly and is the first record of this species, from this fruit. Island fly, *Dirioxa pomia*, in addition to other species has been trapped in the area and it is feasible that at least some of the larval detections were this species and not Qfly, particularly in the over ripe and very mature fruit. There were also two orchards bordering this orchard, which ceased the area-wide management of Qfly in October 2014. Fly populations from these orchards, may have also contributed to infestation in nearby orchards.

Despite no detections of infestation by regular fruit monitoring, several growers elected to put one cover spray on some of their blocks (not all) prior to harvest as an 'insurance policy'. Normally, 2-4 cover sprays would be used in a season. This is a confidence item for the growers as they adapt to a new program of control, and it should be remembered that with current available pre-harvest chemistries, these do not guarantee 100% efficacy. Overall, pesticide usage was down considerably from previous 'traditionally' managed years, with over 80% of the area under orchard receiving no cover sprays throughout the season, and only one cover spray used pre-harvest on the remaining area under orchard. One of the growers conceded, that he probably didn't require the single cover spray.

The growers reported no problems with market access. None of the fruit was post-harvest disinfested. There was not a single reported detection of infested fruit in any of the fruit sent to market for the 2014/15 season for any of the orchards. All orchards sold their fruit domestically to Woolworths and Harris Farms, with the exception of three orchards. Approximately 70% of the fruit from the largest orchard was marketed domestically, as either pre-packs or loose through Woolworths in Queensland, New South Wales and Victoria, with a small percentage that went through the Brisbane Market. The remaining 30% was sent to Singapore, Hong Kong, Malaysia, Indonesia and the United Kingdom (UK). Every single piece of fruit sent to the UK was individually inspected. The majority of peaches and all plums from the smaller two orchards went to the domestic market (Brisbane Markets: ~40%; Woolworths & Coles ~30% each), with 1000kg of the peaches going to the Malaysian market.

Reducing chemical usage in orchard can lead to a host of benefits, including improved human and environmental (including tree) health and a reduction in the number of secondary pest outbreaks, or 'flare-ups'. Numerous beneficial



insects have been reported in the orchards, since the program was implemented. One grower claimed that he did not have to spray for anything that ‘bites, sucks or chews’, which he would have otherwise. Overall, the program, even in its first year, is looking very effective at suppressing Qfly populations, in endemic areas.

Osage orange: a new host for the Queensland fruit fly

Osage orange, *Maclura pomifera*, has been identified as a host of Queensland fruit fly. This has management implications for this pest. Removal of the fruit from this tree or of the tree itself, in horticultural production areas should be considered to prevent fly populations breeding up in these hosts and/or this tree acting as a successive host for this pest.

Acknowledgements

This project has been funded by **Horticulture Innovation Australia Limited**, using the Summerfruit industry levy with co-investment from **Traprock Group** and **NSW Department of Primary Industries** and funds from the **Australian Government**.

Australian Stonefruit Grower

incorporating the Low Chill Stonefruit Grower

- 2016 Publication Timetable -

Contributions are invited for the next scheduled publication - **FEBRUARY 2016**

FEBRUARY	MAY	AUGUST	NOVEMBER
<i>Advertising Deadline</i> 7 February	<i>Advertising Deadline</i> 21 April	<i>Advertising Deadline</i> 31 July	<i>Advertising Deadline</i> 31 October
<i>Copy Deadline</i> 10 February	<i>Copy Deadline</i> 28 April	<i>Copy Deadline</i> 21 August	<i>Copy Deadline</i> 7 November

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Industry News ...

Local success for Sydney Summer Fruit Growers

The success of the 2014 *local* stone fruit program, between **Woolworths** and peach and nectarine growers in the **Hills District of northwest Sydney**, has resulted in a repeat program this season.



Tree-ripened fruit is being delivered to 23 local Woolworths' stores, all within 30km of the growers' orchards, until December. Fruit is selectively picked at its peak maturity and is on the Woolworths' shelves within 24 hours. This means fruit spends more time on the trees to develop the best flavour, sweetness and juiciness.

The farming families involved are again marketing under their exclusive brand **Bombowlee - local fruit for local families**. The orchards have been known for their premium, early season peaches and nectarines since the 1930s, and supplying Woolworths for over 50 years.

“The response by local consumers to our tree-ripened program over the last two seasons with Woolworths has been outstanding”, says **Mark Jolly of Jolly Family Orchards**. “The on-going support by Woolworths is making this year an even better program for both consumers and growers.

“Although Woolworths has around 900 stores nationally, they have demonstrated the flexibility to link with local growers to market to local families through their local stores. As a result, our growers, consumers and Woolworths all benefit,” Mr Jolly observed.

“**Bombowlee** is a local brand that allows us to pool our fruit,” says **Ray Christie of Christie Orchards**. Most importantly it allows us to provide consistent quality and eating experiences to local consumers. We also take special care to protect our fruit from harvest to consumers, because it is tree-ripened and ready to eat,” he observes.



Bombowlee orchardists Linda and Mark Jolly with Woolworths' Garth Leary

In a new initiative this year, orchard videos have been produced, highlighting the production of peaches and nectarines on Sydney's outskirts. To take a virtual orchard tour, simply click on the QR Code.

QR Code linking to You Tube orchard videos →



Do you use seasonal workers?

The National **Harvest Labour Information Service (NHLIS)** is a no cost service, paid for by the Australian Government and provided by **MADEC Australia**, to assist agriculture and horticulture businesses find seasonal labour.

The service advertises vacancies nationally, and provides a trained consultant to take the many calls that are often generated. Your time is not wasted with people who do not fit your criteria, allowing you to get on with your core business. Criteria may include such things as experience/qualifications, whether the callers have transport and accommodation, length of time the worker needs to stay etc.

The NHLIS provides a toll free 1800 number for workers to ring staff then put suitable callers through to you by the method you prefer, e.g. direct phone call or email. Vacancies are registered on the government's Harvest Trail website, as well as social media.

Please call the NHLIS toll free number 1800 062 332 for more information.





Industry News ...

Burning & Burying stockpiled chemical containers is an outdated practice that no longer has a place in Australian agriculture.

Irresponsible disposal both costly and harmful

Increased scrutiny from consumers and the wider community means responsible waste disposal and good farm environmental management practices are more important than ever if farmers are to maintain consumer confidence.

In June 2015, a Cowra vineyard operator was convicted and fined \$15,000 in Orange Local Court and ordered to pay the prosecutor's costs of \$20,000 after pleading guilty to polluting waters on an estate near Orange.

The NSW Environment Protection Authority (EPA) prosecuted the operator after the residue from 21 drums, containing the pesticide chlorpyrifos, was emptied into a constructed stormwater drain on the estate in January 2014. The drain flows downwards to Summer Hill Creek.



The operator pleaded guilty to one charge of polluting waters contrary to section 120(1) of the Protection of the Environment Operations Act 1997.

EPA Director **Gary Whytcross** said, "Chlorpyrifos, an organophosphorus pesticide used to protect crops such as cotton, is highly toxic and poses a significant risk to aquatic life, animals and humans when released into the environment in high concentrations. The EPA prosecuted the operator because his actions posed a real risk of harm to the environment, within a drinking water catchment."

In another example of irresponsible disposal, the Victorian EPA fined an EchUCA man for setting industrial waste on fire on a site not permitted to receive it in June 2015. EPA officers visited the farm in April after observing thick, black smoke coming from the premises. Upon inspection, the officers found a dam half filled with burning industrial waste, including fencing materials, timber pallets, concrete pipes, irrigation piping, plastic drums and tyres.

Following the EPA investigation, the man was fined \$1771 for burning the waste. The EPA also issued the company, which operates a farming business from the site, with a clean-up notice requiring it remove all remaining industrial waste from the dam and to dispose of it at a licensed facility.

EPA Acting North West Manager **Danny Childs** said it was important businesses deposited or recycled industrial waste in accordance with regulations. "EPA takes its role as the environmental regulator very seriously and has high expectations when it comes to the management of industrial waste. This incident should serve as notice to all operators that they need to follow appropriate procedures for disposal of waste and ensure they're adhered to by those working on site," he said.

drumMUSTER and ChemClear are perfectly placed to provide Australian farmers with a simple and cost effective way to keep their farms clean and protect the environment. In the first instance, had the operator in Orange utilised the services of ChemClear, he would have been able to dispose of his chemicals at a significantly reduced cost.



Collection of Group 1 chemicals is free to waste holders due to a levy applied at the point of sale. Alternatively, had the operator registered the chemicals as ‘unknown, unlabelled, expired or no longer registered for use’ (Group 2 eligible), it would have cost him \$3500 including freight to dispose of them in a safe manner.

National ChemClear Program Manager **Lisa Nixon** said, “If the Cowra farmer had registered his obsolete chemicals with ChemClear, he would have had two opportunities in the last two years to have them collected in his local council area”.

In the second case, the operator could have delivered his plastic drums only kilometres away at the Echuca Environment Centre, one of 789 *drumMUSTER* collection sites available across Australia for the recycling of chemical drums.

drumMUSTER is free to users thanks again to a levy paid on eligible products by participating chemical companies who have signed onto the stewardship program and collect the levy at the point of sale.

National Program Manager Allan McGann said, “Burning and burying stockpiled chemical containers is an outdated practice that no longer has a place in Australian agriculture.” The overall aim of the programs is to ensure good farm management practices so that quality assurance standards can be met.

We encourage all chemical users to accept their responsibilities to dispose of chemicals and empty containers in an environmentally sustainable manner to protect the environment and avoid legal action and costly fines.

For more information contact: Olivia Porter - *Communications Officer*
Agsafe Ltd - Accreditation & Training *drumMUSTER* ChemClear Ph: (02) 6230 4799 – Email:
olivia.porter@agsafe.com.au

Research ...

THE ELUSIVE FEMALE FRUIT FLY LURE – PART 1: WHY IS IT TAKING SO LONG?

The aim of this article is provide fruit growers with information regarding the development of what has been described as the holy grail of fruit fly control, *the female fruit fly lure*. Male lures have proved to be a resounding success in fruit fly management, in terms of monitoring the arrival of fruit fly populations in the orchard, timing of control (e.g. protein bait spraying), and mass killing of males (Male annihilation technique, MAT) in an attempt to cause a population crash by leaving females unmated. But in the end it’s the female flies that are responsible for the damage; piercing fruits with their ovipositors (stings), and laying eggs that lead to maggot infestation and rots. So why haven’t we come up with an equivalent female fruit fly lure yet? Why is it taking so long?

The short answer is that a female lure is a whole new ball game, and hopefully this article and the next will explain why. **Part 1** looks at why female lures are very different from male lures, and consequently why designing and employing a female lure needs a change in our perspective. **Part 2** looks at the work that has been carried out in a HIA funded research project generating proof of concept for a fruit odour based female lure, and at the next phase of research funded by the Plant Biosecurity CRC, which aims to produce an effective female Qfly lure by 2018.

What is an “effective female Qfly lure”?

Although it is somewhat stating the obvious to say a female lure is a device that attracts female Qfly, the term *effective* here is key. An effective female lure is not just a trap that pulls in a few flies. To be effective, it must contribute significantly to fruit fly control – and be scientifically and operationally proven to do so. Thus an effective lure might be a device that can be used for predictable monitoring purposes, or one that traps enough female flies to reduce fruit damage, or significantly reduces the overall Qfly population. A lure could be better than other commercially available female lures, but without evidence that it is cost effective and of benefit to growers, it still might not be effective.

So while there are currently several female Qfly lures available on the market in Australia (e.g. traps baited with proteins and yeast based formulations and orange-ammonia traps) these traps have yet to be proven *effective* at fruit fly control. Generally speaking, fruit growers, horticultural consultants, and pest management researchers are not satisfied with the available products. They do not pull in anything like the number of flies that male lures do. They also need replacing frequently. Hence the need for a concerted research effort into designing something that is more effective.



What are the main problems in developing the female lure?

The difficulty in designing a female lure comes largely down to differences in the way that male and female fruit flies respond to odours. The male lure, cue-lure, takes advantage of a quirky behaviour that male fruit flies display – a strong attraction to particular odourous chemicals (volatiles) that are present in nature in small amounts. In Qfly, this volatile is raspberry ketone, for which cue-lure (a synthetic chemical) is a mimic (Article 6, Oct 2016 explains this in more detail). Unfortunately there is no known equivalent behaviour in female flies but, like many plant feeding insects, female Qfly are attracted to the odours given off by the plant species they lay eggs on. This means that female lures could potentially be based on fruit odours.

Here are four important differences between male and female lures:

1. Female lures will need to combine olfactory (odour) and visual stimuli

As every fruit grower knows, cue-lure will readily attract male flies into clear plastic traps without the need for visual cues. In this respect, cue-lure acts very much like a pheromone (strictly speaking it is not a pheromone as it is produced by plants) and can be used in traps in a similar way. However, research on female flies has shown that although they are attracted to fruit odours, visual cues are important at close range. Traps designed to lure female Qfly need to incorporate both olfactory and visual cues or the females simply won't land, let alone enter the traps.

2. Female lures are competing with a sea of attractive odours

Cue-lure works so well because a cue lure trap emits an odour thousands to millions of times stronger than a natural source of the odour (raspberry ketone) in the environment. To a male fly, a cue-lure trap must be extremely conspicuous, like a bright light in a dark sky. Compare this with a female lure developed from a fruit odour. In a ripe fruit orchard, the lure would be competing with a sea of fruit volatiles produced by the thousands of fruits surrounding it. If the lure is to have any success in catching females in this environment, the odour emitted from the trap would have to stand out against this odourous background.

3. Female lures will be complex odours

Cue-lure is a single volatile that has a powerful effect in attracting male Qfly. Fruit odours are extremely complex by comparison, often comprised of tens to hundreds of volatiles each present in different concentrations. Research has shown that only a subset of these volatiles will be necessary to trick the insect into responding to an odour as if it were a real fruit, but the onerous task remains of identifying which volatiles these are and getting the blend right. And after that is achieved, a suitable dispensing technology needs to be identified to ensure the synthetic blends retain their structure over time.

4. Virgin and mated females respond to different odours.

Whereas cue-lure attracts males at all stages of adult development, the response of female flies depends on their maturity. Research has shown that odours of protein and yeast are mostly attractive to virgin (unmated) females. Mated female flies that are not hungry for protein show a much lower response to these odours, and are instead attracted to fruit odours. This means that different lures are likely to be effective in trapping female flies at different stages of maturity.

What about protein bait, and orange-ammonia traps?

As mentioned above, protein bait can catch mated female Qfly but it is far more attractive to unmated females. Protein traps are therefore great for mopping up newly emerged adult females in the orchard (or those flying in from the surroundings), but their use as a trap for mated females is questionable. Mated females flying into an orchard to lay on the fruits might ignore these traps and thus go unnoticed by growers.

Orange-ammonia baits are composed of orange juice and an ammonia source such as ammonium carbonate (often with the addition of an insecticide and preservative such as borax). How these baits exert their attractive effects on female flies isn't exactly known, but it is likely to be a combined effect of orange volatiles signalling a fruit, and ammonia signalling protein or yeast. This type of lure might therefore have some of the advantages in attracting both virgin and mated females. Orange-ammonia traps are sometimes reported as attracting large numbers of flies, but many growers find them



ineffective. The reason for these conflicting reports isn't exactly known. It could be in the way that the orange-ammonia is made up (there are many different recipes), the orchards in which the traps are used, or the timing (fruit maturity) at which these lures exert their best (or worst) effect.

So then, with all these caveats in mind, is the design of an effective female lure achievable goal in the next few years?

Yes. A female lure is entirely possible.

We just need to change our mind-set. As lure developers and growers alike, we need to recognise that we are not looking for another cue-lure. The female lure will have to be designed and applied with the behaviour and ecology of female fruit flies in mind.

So here's the good news:

Female lures may still be highly effective

Even if a fruit-odour based female lure cannot compete well with an orchard full of ripe fruits it may still be effective. Our research has shown that females strongly prefer the odours of ripe fruits to unripe fruits (see Part 2), and this could mean that lures mimicking ripe fruits will be effective in orchards when the fruits are unripe and yet still vulnerable to Qfly attack. Flies often appear in the orchards before the fruits are fully ripe, so such a lure might help mop up the females before the resident population escalates out of control. Female Qfly can live for several weeks, so those that are removed early on will not be stinging fruits when they ripen. And there are still ways in which a fruit odour lure might work when fruits are ripe: females fruit flies prefer the odours of some fruits to others, and this means we might be able to formulate attractants and 'super blends' that stand out against the surrounding odours. Another possibility is a push-pull strategy using odours. Our research has identified volatiles that are deterrent to female flies (associated with mouldy or rotting fruits). These deterrents might be used as an odour barrier around the crop (the push), combined with areas away from the orchard that are baited with large quantities of attractant fruit odours (the pull) together with insecticidal baits and traps.

Tackling the design of complex odour lures

The entire fruit odour does not have to be reconstructed in order to be attractive to female flies (See Part 2). Our research has shown that even a blend of three volatiles can be attractive to mated females if the right volatiles are selected, and we are currently carrying out research to further strengthen the attractant power of our formulations. The main obstacle at the moment is not so much identifying the volatiles that might work together (time consuming, but doable), but in designing a dispenser for the odour that allows the volatiles to be released in the right proportions over a long period. There have been major advances in this lure-dispensing technology recently, with the design of new materials to vastly improve odour release.

Next-Gen Protein lures

There are already new protein-based lures commercially available that have improved on previous traps. These new lures claim to catch more flies, have better longevity, and are easier to use compared to earlier versions. The coming years may see further improvements in these protein lures. It may be that a lure that combines the effects of protein and fruit odours can effectively attract virgin and mated females, in which case synthetic lures may incorporate volatiles from both fruit volatiles and protein.

Acknowledgements

This article was written by **Paul Cunningham** of the Queensland University of Technology as part of Horticulture Innovation Australia Limited Project SF12013 "*Fruit fly IPM for Summerfruit, with a focus on developing an effective female lure-and-kill device*". This is the sixteenth of a series of articles providing information on fruit flies.

This project has been funded by Horticulture Innovation Australia Limited using the summerfruit industry levy and matched funds from the Australian Government.





Research ...

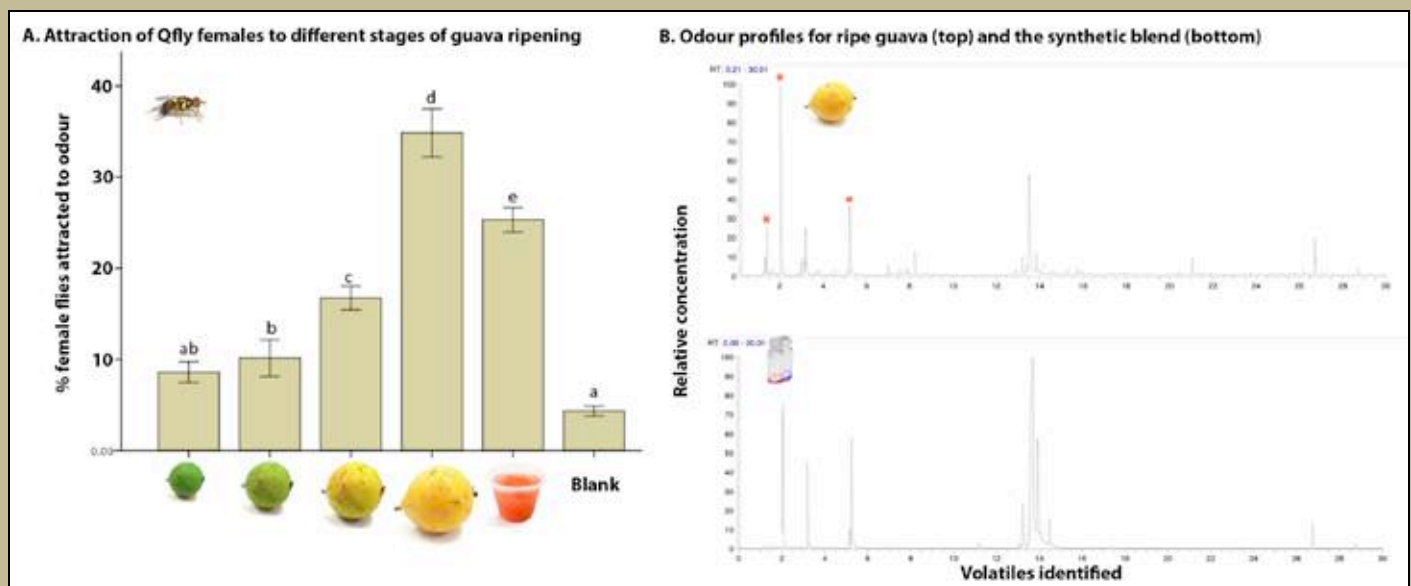
THE ELUSIVE FEMALE FRUIT FLY LURE – PART 2: THE SCIENCE BEHIND DESIGNING A FRUIT FLY LURE

Part 1 of this two part series looked at the problems associated with designing a female lure, and how we need a change of perspective to develop a field-effective trap. **Part 2** looks at the results of our recent HIA project aimed at generating proof-of-concept for a fruit odour based female lure and the steps carried out in developing our prototype blend.

Step 1: What to base the lure on?

Guavas were the natural choice to begin our development of a synthetic lure, since these fruits are known to be highly attractive to female Qfly. But which stage of the ripening guava is most attractive? This is important as the odours of fruits change dramatically during ripening. Experiments were carried out within large outdoor cages, releasing mated female flies and recording their attraction to four different ripening stages of guava, and to pulped guava juice. Our results (see Box 1) revealed that flies showed the strongest attraction to the late ripening stage, which was even more attractive than guava juice.

Box 1. Designing a prototype lure



The histogram (Graph A) shows the results of our initial experiment studying attraction of mated female Qfly to the odours of different stages of ripening guava (two unripe and two ripe), including pulped guava juice and an odourless control (blank). The letters above the bars denote whether the differences in attraction to the odours were statistically different: bars with the *same* letter above them are *not* different statistically. Our results therefore showed that the second (more mature) ripening stage of guava was more attractive than all other stages, that attraction increased as the fruit ripens, and also that the first unripe stage was no different from the odourless control.

Graph B shows odour analysis of ripe guava using a technique called gas chromatography-mass spectrometry (GC-MS). Each of the 'peaks' in the graph denotes a different volatile that makes up the guava odour, and the height of each peak relates to how much of that volatile is in the odour. Of the many volatiles identified in guava odour (top graph) we selected 11, and made a synthetic blend matching the proportions of these volatiles to the natural odour (bottom graph). Note the three high peaks labelled with an asterisk at the beginning of the profile, these volatiles increased dramatically as the fruit ripened, and were subject to further testing – with some very promising results!



Step 2: Analysing guava odours to identify volatiles.

Having identified which stage of guava was most attractive, our next task was to see which volatiles (odourous chemicals) gave these fruits their characteristic ‘guava odour’. This was achieved using a technique called gas chromatography-mass spectrometry (GC-MS), and Box 2 explains the results of a typical analysis for ripe guava. Odours of whole ripe guavas are composed of over 100 volatiles!

Step 3: Selection of odours for a prototype lure

We constructed an 11 volatile synthetic lure from some of the most abundant volatiles in guava odour, recreating the same relative amounts of each of the constituent volatiles so that the odour profile of our synthetic lure matched that of ripe guavas (see Box 2B, bottom graph). Within this 11 volatile blend, three volatiles were of particular interest to us, as comparisons of the different ripening stages of guava showed that these volatiles increase dramatically when the fruit begins to ripen. Moreover, they were common among many ripe fruits that Qfly attacks.

Step 4: Testing the power of our synthetic blend in field cages.

But was our synthetic odour attractive to Qfly? Our result was surprising. In field cage trials, we found that our 11 volatile blend was attractive to both male and female Qfly. However, *our “ripening” blend of just three volatiles was as attractive as the entire 11 volatile blend.* Moreover, when we removed these three ripening volatiles, our blend lost its attractive power. We then tried our three volatile blend against pureed guava, and found that although guava juice was attractive to Qfly, the three volatile blend was even more so. And when we tried each of the three volatiles alone, they were not attractive to the flies independently. We therefore concluded that the **ripening volatiles were key to female fruit fly attraction, and that they work synergistically to signal a potential fruit.**

Intrigued by this, we set up another trial this time looking at how the emissions of ripening volatiles might influence the female Qfly attraction to different fruits. We selected peaches (which the flies love) as a preferred fruit, and the two less preferred fruits, cucumber and squash. As expected, females showed a strong preference for laying their eggs in peaches. However, when we injected the cucumber and squash with 3 volatile blend, their attractiveness rose significantly, with cucumbers becoming as attractive as ripe peaches.

Step 5: Preliminary field work

Of course the most important thing is whether our attractants work in the field as an effective female lure, and in the remaining time we had for this project we began a preliminary field trial using our prototype lures. The trial was conducted in a ripe nectarine orchard, using a commercially available visual trap (which is used to trap apple maggot fly in the U.S.) to which we added our prototype odour lures. Although the trial showed a trend for increased attraction using either the 3 or 11 volatile blend, the data were not conclusive. The main issue here was rapid evaporation of the synthetic volatiles, especially in the 35 degree summer heat, and we are now collaborating to improve our dispensers. The studies were successful, however, in that they gave us a better feel for what was needed for a field effective lure, in terms of the odour dispensing technology and the visual trap itself. It also gave us an invaluable opportunity to work with fruit growers in Queensland, and learn more about how a female lure could be integrated with current Qfly management techniques. Thanks especially to Andrew Finlay, Rowan Berecny, and Ross Stuhmcke from *Summerfruit Australia*.

2015-2018: The Next Phase of Female Qfly Lure Development

With our skillset for selecting and testing odours for Qfly attraction in place, together with a collaboration with *Summerfruit Australia* growers, we are ready to go full steam ahead designing lures and carrying out extensive field testing of traps and female attractants. **The aim is to have an effective lure and kill trap for female Qfly by mid-2018.**

The lure development component of this next-phase research will continue screening for volatiles and testing synthetic blends, investigating both fruit and protein odours. And in a phase-shift in research, we’ve also built a new collaboration with Stockholm University that aims to identify candidate volatiles and blends by scanning the Qfly brain.



Our field testing requires explicitly on access to fruit orchards to hang up our traps. We have ongoing support from *Summerfruit* growers in Stanthorpe, and we're hoping to make this a nationwide effort. The more growers we can work with, and the more diversity in fruit orchards we can test our lures in, the greater the chance we have of developing an effective lure by 2018.

We need your support! Please contact us if you are willing to take part in our field trials.

Acknowledgements

This article was written by Paul Cunningham of the Queensland University of Technology as part of Horticulture Innovation Australia Limited Project SF12013 "*Fruit fly IPM for Summerfruit, with a focus on developing an effective female lure-and-kill device*". This is the seventeenth of a series of articles providing information on fruit flies.

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Research ...

TWO AND A BIT YEARS ON: WHERE ARE WE NOW WITH FRUIT FLIES?

I wrote the first of these articles in May 2013. At that stage the industry was in crisis over the greatly reduced usage permits for fenthion and dimethoate, making them unavailable for most fruit fly control. As a researcher I have been caught up in the intense politics and activities around Queensland fruit fly control (particularly), which has also unfortunately coincided with the major structural changes around Horticulture Innovation Australia. During that period we have gone through an awful lot of talk, attended more meetings than most of us would care to do in a life-time, and finally we are starting to see some major initiatives beginning to gain real momentum. This article, the final in the series, is my personal perspective and summary of some of the current and future major activities in Australian fruit fly research and management.

Fruit fly politics

National Fruit Fly Advisory Committee

Minister Joyce called for the formation of the *National Fruit Fly Advisory Committee* (NFFAC) in **May 2014** and it officially ended in **September 2015**. There will be a future of the committee, under a slightly different name and format, but it is not yet known what that form will be. The NFFAC has an independent chair (Mr John Durham) and consists of at least one senior official from each of the States, the Commonwealth, HIA, the Plant Biosecurity CRC, Plant Health Australia (who provides the secretary), and grower representatives. Its role is to provide strategic direction to fruit fly policy and RD&E in Australia, and reports to the federal minister.

The NFFAC was severely ham-strung by having no administrative authority, it was an advisory committee only, and having no budget. However, it has brought the jurisdictions together and given growers some voice in policy level discussions. As an outsider looking in it has been difficult to see what the NFFAC has so far achieved, but its role of high level national coordination is important and it is to be hoped that its new form has 'teeth', so as to allow active implementation of policy.

National Fruit Fly Research Development & Extension Plan (FFRD&E Plan)

At the same time as he called for the creation of the NFFAC, Minister Joyce requested the Plant Biosecurity CRC, operating on behalf of the NFFAC, to write a national FFRD&E Plan. A writing group was formed to do this, which I chaired, and we prepared the document during the second half of 2014. Many growers and research provided input to the



document, which was endorsed by the NFFAC in February 2015, and officially released by Minister Joyce in June. During July and August regional prioritisation meetings were held and the prioritisation report has just been accepted by the NFFAC.

At this point the FFRD&E Plan is just that, a plan. The national priorities strongly urge greater coordination of fruit fly RD&E activities, the funding of RD&E firmly focused on fruit fly in-field management, and a greater emphasis on market access. The Plan is entirely unfunded at this point and it can only be hoped that the NFFAC Vs 2 can pressure for funds to help implement the Plan.

Fruit fly research

It has taken a while, but some significant new research initiatives have begun in response to the loss of dimethoate and fenthion. These are not offering 'quick fixes', but do offer significant promise in the medium to long term. The big change in the last few years has been the re-emergence of CSIRO in active fruit fly research, and a much greater coordination and collaboration among different research agencies in the work being undertaken. Two major initiatives, both new in the last 18 months, illustrate these gains. In both of these major projects, and in others not listed, there is overlap of researchers. So while not every fruit fly researcher in Australia is involved in every project, there are some common representatives in most so that synergies can be gained.

SIT+

The creation of the SIT+ Consortium has been the single largest research initiative promoted by the loss of D&F. Sterile Insect Technique (SIT) was discussed in document 4 of this series (August 2013), and that time no decisions had been made about the future of SIT for fruit fly management in Australia. Since then, HIA has driven the creation of a major R&D initiative which includes researchers from CSIRO, Macquarie University, NSW and S.A. state agencies and NZ. The S.A. government has also committed to a sterile fruit fly factory, which had it 'sod turning' only a few weeks ago. The funding commitment to SIT+ is several 10s of millions of dollars and it offers great potential for fruit fly control, particularly in S.A. and Victoria, in the medium to long term.

ARC Training Centre for Fruit fly Biosecurity Innovation

Earlier this year, the Australian Research Council awarded \$3.7million for training centre focused on postdoctoral and PhD researchers in fruit fly. Led by Macquarie University, with nodes at QUT and the University of Western Sydney, the scheme also links directly with external public and private research agencies. This centre will play an important role in coordinating university and other public sector research, ensuring maximum potential is gained through collaboration, while minimising research competition. The activities of the Centre will focus on fruit fly diagnostics, in-field ecology, SIT+, and development of pathogens for fruit fly control.

Grower led engagement

A really obvious thing which has changed in the last two and half years is the dramatic increase in grower-led control efforts. Especially in the former area-free zone, and in Western Australia, grower groups are being pro-active in local management and coordination of fruit fly control activities. The importance of these activities, both now and moving forward, cannot be stressed too strongly.

Summary

The past few years have been extraordinarily difficult with respect to fruit fly. The loss of dimethoate and fenthion left many industries without satisfactory alternatives, and these alternatives are still lacking in many cases. Short term response has seen some emergency chemical registrations, and there are promising signs from trials for new chemicals. Grower political pressure has led to Commonwealth and State governments acting on fruit flies, although much more needs to be done. As a researcher, I am confident that a much invigorated national fruit fly research effort will offer good control tools in the medium term (5 years), but the time-lines are at least that long for the new generation tools. Until then, focus needs to be directed at optimising on-farm application of male annihilation, protein bait sprays and crop hygiene; and community-led area-wide management initiatives.

Further reading

National Fruit fly RD&E Plan:

<http://www.pbcrc.com.au/research/fruit-fly-plan>

Ministerial release of RD&E Plan:

<http://www.agricultureminister.gov.au/Pages/Media-Releases/research-plan-to-enhance-aus-hort-against-fruit-fly.aspx>



Acknowledgements

This article was written by Tony Clarke of the Queensland University of Technology as part of Horticulture Innovation Australia Limited Project SF12013 “*Fruit fly IPM for Summerfruit, with a focus on developing an effective female lure-and-kill device*”. This is the eighteenth and last of a series of articles providing information on fruit flies.

This project has been funded by Horticulture Innovation Australia Limited using the summerfruit industry levy and matched funds from the Australian Government.



Research ...

The Australia-Africa Plant Biosecurity Partnership – Australia sharing fruit fly expertise with Africa

Three plant biosecurity managers from Africa are working with leading Australian fruit fly researchers to take up the fight against the invasive pest in Burundi, Mozambique and Tanzania.

“These countries are highly dependent on agriculture, making fruit fly very damaging not only for trade but also for food security,” said **Dr Michael Robinson**, CEO of Australia’s Plant *Biosecurity Cooperative Research Centre* (PBCRC) which is leading the project.

The new Australia-Africa Plant Biosecurity Network supports increased agricultural production, improved food security and better market access for farmers in ten African countries. Fifteen Network Senior Fellows are currently in Australia, with **Epitace Bizimungu, Armando Marcos Come** and **Katemani Mdili** spending three weeks studying the key aspects of fruit fly research and management; biology, market access, monitoring and control.

Epitace is Branch Head of Pest Control in Bujumbura, the capital of Burundi. Fruit fly is a major pest in Burundi, affecting exports to neighbouring and European countries. Epitace is working to reduce the impact of fruit fly on Burundi’s mango crops.

Armando is in charge of Mozambique’s Phytosanitary Inspection and Plant Quarantine Service. More than 75 per cent of Mozambique’s workforce is in agriculture, making the industry crucial for job creation, trade and poverty reduction. He aims to review Mozambique’s quarantine pest lists and assessment procedures, train inspectors and improve facilities.

Katemani is a Senior Agricultural Officer with Plant Health Services in Tanzania. Exotic pests such as fruit fly have had a serious impact on Tanzania’s agricultural exports and the economy in recent years due to a lack of specialised knowledge. “Australia is very good at biosecurity,” said Katemani. “I am hoping to learn more - even the organisational structure and the way the system works; how different institutions work towards the common goal of biosecurity.”

While in Australia, Epitace, Armando and Katemani are participating in a three week rotation with the Queensland Department of Agriculture and Fisheries, the South Australian Research and Development Institute and the Queensland University of Technology (QUT). All three Fellows see the visit as an opportunity to build networks and pass skills and experience on to colleagues back home.

“The three week rotation gives the Fellows a good overview of Australia’s fruit fly expertise, built over decades of dealing with these pests and backed by rigorous science” said Professor Tony Clarke from QUT. “Sharing that knowledge strengthens global biosecurity.”

The project is funded by the Australian International Food Security Research Centre (AIFSRC) within the Australian Centre for International Agricultural Research (ACIAR) and is being delivered by a consortium of PBCRC, CABI and the Crawford Fund. For more information visit www.pbcrc.com.au/research/east-africa/



That's all from me for 2015. This issue brings to a close what must be 40 publications I have produced and edited for the stone fruit industry.

The very, very best to readers for a truly great festive season. Here's hoping that 2016 will be a prosperous and fulfilling year for all involved in the vibrant Australian Stone Fruit Industry.



Col Scotney - Editor – Australian Stonefruit Grower
LCA Communications Manager



"We had to take out the words 'Merry' and 'Prosperous'"

