



POMEWEST
Serving WA Pome Growers





Pomewest Committee Members

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APC — Pomewest 2015–16 projects

WITH funding allocation

Project	\$
Commercialisation for WA (FW Co-operative)	\$120,000
Maturity Standards for identified WA Apple varieties (Ashmere Consulting)	\$82,000
Medfly Surveillance Trapping Network (Ashmere Consulting)	\$52,750
Codling Moth (DAFWA)	\$35,000
Markers, Markets and validated nutritional qualities of Australian Apples (UWA)	\$25,000
Natural Mite control Project (shared with the Stone Fruit Subcommittee) (Stewart Learmonth DAFWA)	\$18,300
Promotion & Publicity Local Project (Fresh Finesse)	\$16,000
Apple Looper Project (shared with the Wines of Western Australia) (Stewart Learmonth DAFWA)	\$4,870

APC Fee for Service

POME Fruit effective from 1 January 2015

Type of fruit	\$/kg
Fresh Fruit — Apples, Pears, Nashi, other	0.015
Processing fruit	0.005
Biosecurity FFS for fresh fruit	0.002
Biosecurity FFS for processing fruit	0.001

From the Executive Officer



BY NARDIA STACY
EXECUTIVE OFFICER,
POMEWEST

The season will be done and dusted, by the time you read this update. By all accounts it has been a robust picking period. Reports indicate that crop yield has been quite heavy and supply will be sound this year.

The fruit has been well coloured and of good size. All indicators point to good results for most WA apple and pear growers.

However it may just be early maturity of some varieties this year that will challenge the success of the season. Growers and packers may need to be diligent when managing storage and maintaining quality. It is the focus on quality that will continue build demand through consumer confidence. At the end of the day it is the fruit eaters taste experience that is the key factor to maintain and grow this industry.

Pomewest continues to be committed to the maturity standards projects for WA and we hope to report more on this at the end of its project term and our plans to progress the outcomes.

Projects

Q fly

On behalf of apple and pear growers in WA, the Pomewest Committee, Harvey Giblett, the Chairman of Pomewest, and myself, I would like to congratulate the Department of Agriculture and Food Western Australia (DAFWA) on the recent successful eradication of Qfly in the suburb of Alfred Cove in the Perth Metropolitan area.

This means that the Department has met the national requirements for reinstating Qfly area freedom for Western Australia. The Qfly trap inspections undertaken

and properties inspected within the Qfly outbreak zone, constitutes a mammoth effort by dedicated DAFWA staff.

This is a great result for Western Australia, Pomewest and all producers throughout WA.

ANABP 01[®] and Bravo[™]

The three step approach to launching and introduce the variety and trademark to the world has been the big news here in WA for the last month or so.

We sometimes lose sight of the enormity of such an endeavour and how much effort and commitment has been undertaken by all involved in this substantial project.

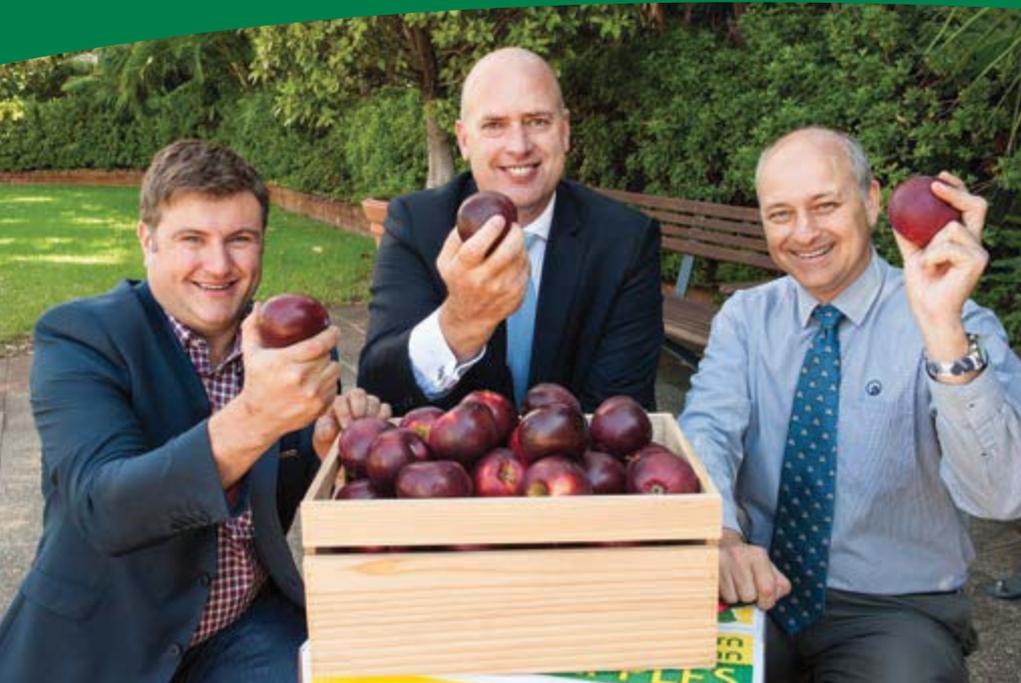
Since its inception, the apple's potential had been recognised but to now see it come full circle and to see it on the shelf at retail is a celebration.

The fact it has been received with such gusto by both market and consumers has really been phenomenal.

This apple is delivering all its promises and, we hope for the benefit of the WA Pome industry, it is set to be the next success story on the global fresh produce stage. If nothing else it has impacted and raised the profile of the WA apple industry in a very positive way — apples are definitely being talked about a lot this season.

Trees are still available to all commercial growers and orders are being taken for 2017 plantings please contact myself if you are interested or wish to discuss the variety.





ABOVE: Mario Casotti, Dean Nalder and David Windsor DAFWA with the Bravo™.

This edition

We present articles on our Apple Looper and Mite projects Bravo™ release and a general update.

I hope you continue to find this subscription a valuable way for us to report our activities to you. Our contribution to this publication forms part of our services to our membership via the Fee for Service via Agricultural Produce Commission. 

MORE INFORMATION ►

I invite and welcome feedback or suggestions for content of future editions.

Pome Growers Meeting

On Tuesday 17 May a Pome Growers' meeting was held at the Manjimup Horticultural Research Station. The program included guest speaker Dr Rebecca Darbyshire Research Fellow University of Melbourne Tatura Victoria on the national climate change project. Our own Susie Murphy on the dormancy breaker spray trials results and Rohan Prince DAFWA on the Netting Demonstration site.

Other Pomewest projects were also presented to the 40 growers attending the day.

Pome Grower meetings are opportunities for members to have their say in the future direction of Pomewest projects, industry objectives and an opportunity to engage with the committee members.

We encourage you to attend further meetings, we are planning the next meeting off-season in September/October to maximise grower participation.



APRIL 2016 Grower Field Day.



Committee & staffing news



BY NARDIA STACY
EXECUTIVE OFFICER,
POMEWEST



Thanks Terry Martella for the last six years!

It is with sadness that we say goodbye to Terry Martella, Kirup orchardist, who retires from the Pomewest Committee this May. Terry has served, representing the Pome industry, the Fruitwest and Pomewest Committees since 2010. Terry has been an active member, and his expertise, industry knowledge and valuable contributions will be sorely missed.

On a personal note — Terry, I have appreciated your openness, insight and advice since I have been involved with the fruit industry and I think it's great that you can now just concentrate on the business of growing fruit.

We thank you Terry on behalf the Pome Industry and will advise Terry's replacement on the committee shortly.

Welcome back Susie Murphy White

Well, she never really left, but I can report that the Pomewest Committee has recently decided to continue to support and fund Susie's work in the next financial year which is great news.

Susie will continue her dormancy project, future orchards co-ordination and be available as a technical officer to support Pomewest grower members. Susie is based in Manjimup, please feel free to contact Susie if you have any suggestions for programming of field days or any technical enquiries.

Susie will continue to report her work in this publication.



Sniffing out infestations of apple looper in apple and grape crops

STEWART LEARMONTH AND HELEN COLLIE
DEPARTMENT OF AGRICULTURE AND FOOD, MANJIMUP

Apple looper (*Phrissogonus laticostata*) is a native insect that damages fruit in apple orchards and vineyards in the South West of Western Australia.

Apple fruitlets are attacked, and damage to wine grape berries may introduce bunch rots. Early detection of the apple looper can be difficult and poses an ongoing threat to apple orchards and vineyards.

A recent study by the Department of Agriculture and Food, WA (DAFWA) has looked at the effectiveness of pheromones to monitor the presence of the pest to assist growers to protect their crops.

APPLE looper grubs are capable of gouging large cavities in apples.

INSET: Female apple looper moths; wingspan 16–18mm. (Photo: TASMOTHS.NET).



APPLE looper grub damage to grapes. (Photo: Simon Eyres, DAFWA).

Apart from some feeding on apple flower petals, the first sign of an infestation is damage to young, developing fruit just after flowering.

Both adults and larvae are difficult to detect in crops. Moths are reasonably small and non-descript, and larvae are a similar colour to foliage. Larvae are not easily dislodged when apple clusters or grape bunches are tapped.

The looper has probably been responsible for damage to apples over many years, on occasion being misidentified as heliothis

damage. Insecticides used to control spring pests of apples would result in reduced numbers of looper larvae.

However, the situation for vineyards was different. Damage to wine grapes by the looper had not been noted until the 2008–09 season, when severe and widespread damage occurred. The reasons for this are unknown, but in the same year damage to apples was high also.

This prompted a closer look at how best to monitor the presence of pest numbers of apple looper.

The study sought to identify whether pheromones could be used to monitor moths and provide advance notice to growers of an impending infestation.

Supported by the Pomewest Sub-Committee of the Agricultural Produce Commission and Wine Australia's Regional Program, DAFWA completed the project in the 2015–16 season.

Pheromone Entomologist Dr Richard Vickers sourced chemicals from a European company to produce a series of blends to test in the field.





PHEROMONE traps deployed in an organic apple orchard.

INSET: Pheromone traps with different lure blends.

The parent chemicals were selected based on those known to have attractant activity for moths in the same family as apple looper. In all, seven blends were formulated for testing.

Each of the blends was absorbed by hollow rubber tubes placed on sticky bases in corflute triangular traps.

Field sites for testing the pheromone blends were selected on the basis of a history of apple looper infestation.

One vineyard near Carbanup in the Margaret River wine region, and two organic apple orchards — in the Perth Hills and in Manjimup — were chosen.

Five replications of each blend were carried out at Carbanup and Manjimup, with four replications at the Perth Hills orchard.

The pheromone traps were deployed to coincide with flowering to early fruit set. They were hung in the crop canopy in late September and checked weekly for moths over the next six weeks. At the same time traps were checked, fruitlets were examined for the presence of looper larvae or their characteristic damage.

What we found

No male apple looper moths were caught in the pheromone traps.

Low to moderate levels of apple looper larvae and associated damage to fruitlets was observed on the three properties where the pheromone traps were deployed.

This result showed that none of the test pheromones and blends was successful in attracting apple looper moths.

What we recommend for the future

The project was undertaken with the expectation that using existing synthetic insect pheromone chemicals attractive to moths in the same family as the apple looper may result in defining a successful blend, or refinement of the concentration of the different chemicals used.

Using “off the shelf” chemicals was a cost, and time effective option, rather than commencing a longer term project to define and develop a synthetic pheromone specific for apple looper.

With no activity demonstrated for the blends assessed, other options need to be considered.

The availability of a synthetic pheromone specific to apple looper is considered to provide the most effective means of detecting pest populations of apple looper and enable growers to make timely preparations to protect their crops.

In each year since the large invasion in 2008–09, some spraying to control apple looper has been required.

With the availability of a pheromone trap, it is expected that individual farms can be monitored efficiently to determine whether pest populations are present.

Within Australasia, there are two laboratories that could identify the chemical composition of the apple looper pheromone to develop a field stable synthetic equivalent.

A major issue that must be addressed is the ability to rear field-collected larvae to dispatch the large number of apple looper pupae required for laboratories to characterise the pheromone.

Previous attempts to collect mature larvae from field infestations and rear them to pupae have resulted in high levels of mortality. This challenge must be overcome before obtaining funds to identify the pheromone composition.

Acknowledgments

Financial contributions to the project by the Pomewest Subcommittee of APC and the Wine Australia Regional Program are gratefully acknowledged.

The co-operation of growers in allowing us to have access to their farms to deploy traps and monitor for looper larvae is greatly appreciated. 

MORE INFORMATION ►

For more information contact Stewart Learmonth, Manjimup Horticultural Research Institute, Department of Agriculture and Food, Manjimup at stewart.learmonth@agric.wa.gov.au

FURTHER READING

Common, I.F.B. (1990). *Moths of Australia*. Melbourne University Press. 535 pp.

Herbison-Evans, D. (donherbison@yaho.com), Ted Cadwallader and Stella Crossley (2008). Web address <http://linus.socs.uts.edu.au/~don/larvae/lare/laticos.html>

Learmonth, S.E. (2015). *Apple looper: pest of apples and grapevines*. Department of Agriculture and Food web address www.agric.wa.gov.au/pome-fruit/apple-looper-pest-apples-and-grapevines



Department of
Agriculture and Food





FADED leaf colour in the case of apple and stone fruit is a symptom of mite infestation.

Mite versus mite in WA deciduous fruit tree crops

BY STEWART LEARMONTH AND HELEN COLLIE
DEPARTMENT OF AGRICULTURE AND FOOD, MANJIMUP

A study to determine whether two types of predatory mites can improve the natural control of pest mites in Western Australia's deciduous fruit tree orchards is underway, with some valuable learnings so far.

The Department of Agriculture and Food, WA project commenced in the 2015–16 season and is supported by the Pomewest and Stonefruit Sub-Committees of the Agricultural Produce Commission.

Pest mites

Deciduous fruit tree crops in WA's south west are food plants for a range of pest mites. They feed on foliage and if unchecked, will cause premature leaf loss exposing fruit to sunburn, and reducing the vigour of trees which affects their ability to produce quality fruit.

A mite only recently recorded in WA — the plum vagrant leaf mite — attacks growing tips of stonefruit trees, and can affect tree-growth habit and overall vigour in newly planted trees.

In 2005, the European red mite, a major pest of apples, was confirmed to be present in WA and has become endemic.

Predatory mites

A range of naturally occurring and introduced predators of pest mites are present in WA. These include predatory beetles and thrips, lacewings, naturally-occurring predatory mites, and two species introduced to WA in the 1970s.

It is only recently that the non-native predatory mite *Neoseiulus californicus*, or 'californicus' has been confirmed to be present in Australia. While it is likely that the predatory mite *Typhlodromus pyri*, or 'pyri' does not occur in WA, both these predatory mites are available in eastern Australia and are permitted for import to WA.

These predatory mites have slightly different food preferences to predators currently present in WA deciduous fruit tree orchards.

Californicus feeds on a wide range of mites like the larger pest mites such as two-spotted mite and to a lesser extent, the European red mite. They also feed on very small mites such as apple rust mite and plum rust mite. Pyri is well known to be a good predator of European red mite, and will also attack two-spotted mite.

Both californicus and pyri can live on pollen, which is a useful attribute when mite prey is not available.



TOP: Plum rust mite being consumed by a naturally occurring sigmaeid predatory mite.

ABOVE: Two-spotted mite and circular eggs and introduced predatory mites and their ovoid eggs. (Photo: VicDPI).

Orchard modification such as planting or promoting pollen-producing groundcover, and alternate row mowing, could enhance the abundance of these species.

These predators can limit the effect of pest mites in orchards but have an inconsistent effect.

What we did

The inconsistent effect of predators, and the arrival of European red mite, prompted a review of natural mite control.

Based on a preliminary survey of pest and beneficial mites in the 2014–15 season, pome and stone fruit orchards were selected across the south west of Western Australia for monitoring in the 2015–16 season.

The orchard location, number, fruit type and blocks selected for monitoring are shown in Table 1.

Orchard blocks were monitored approximately every fortnight. Based on monitoring results to determine the timing of occurrence, and species of pest mites, the californicus and pyri predatory mites were released.

The predatory mites were released into a small area. Monitoring compared the release area with an adjacent area, which was either sprayed or untreated.

TABLE 1 Orchard location and fruit type for monitoring

	Pome		Stone	
	Orchards	Blocks	Orchards	Blocks
Perth Hills	0	0	4	12
Donnybrook	2	5	3	7
Manjimup/Pemberton	3	7	0	7
Total	5	12	7	19

Source: DAFWA

TABLE 3 Predatory mite releases

	Releases Nc*		Releases Tp#	
	Pome	Stone	Pome	Stone
Perth Hills	0	4 blocks	0	0
Donnybrook	2 blocks	6 blocks	0	0
Manjimup/Pemberton	2 blocks	0	1	0
Total	4 blocks	10 blocks	1 block	0 blocks

*Nc = *Neoseiulus californicus* ex South Australia #Tp = *Typhlodromus pyri* ex Victoria

Source: DAFWA

The californicus predatory mites were obtained from South Australia and pyri were imported from Victoria.

Pest mite species found at infestation levels at the monitoring sites is shown in Table 2.

We released californicus and pyri into 14 blocks and 1 block respectively in WA orchards. The table below shows the block locations where the two species of predatory mites were released.

Predatory mites were collected before releasing the new species and where applicable, after the release, to confirm whether the new predatory mite species would establish.

Monitoring continued until mite numbers declined as they entered their overwintering phase.

What we found so far

The main findings of the project to date are:

1. The unexpected early occurrence of high populations of pest mites in some orchards. When monitoring commenced

in November, some sites were so heavily infested, spraying was required rather than releasing predators. Monitoring will commence in October in 2016–17 season.

2. Difficulty in identifying orchards in Victoria which were well infested with pyri resulted in fewer releases of this predatory mite than expected. Late season liaison with orchardists in Victoria has resulted in more monitoring sites and should mean more pyri are available for the coming season.

Whether the natural control of the pest mites is improved as a result of these releases will become clearer after the second season of monitoring is conducted in 2016/17.

Acknowledgments

We are grateful to the Pome and Stone Fruit sub-committees of the APC for funding for this two year project.

The co-operation of growers in allowing us to have access to their farms to monitor pest mites and release predatory mites is greatly appreciated.

MORE INFORMATION ►

For further information contact Stewart Learmonth or Helen Collie Department of Agriculture and Food, Manjimup stewart.learmonth@agric.wa.gov.au

FURTHER READING

Bower CC & Thwaite WG 1995, *The mite management manual — a practical guide to integrated mite control in apples*. NSW Industry and Investment (DPI).

Hetherington S 2005, *Integrated pest and disease management for Australian summerfruit*. NSW Industry and Investment (DPI) and Summerfruit Australia.

Hetherington S 2009, *Integrated pest management for Australian apples and pears*. NSW Industry and Investment (DPI) and Apple and Pear Australia Limited.

Learmonth SE 2015, *Management of European red mite in Western Australia*. Department of Agriculture and Food web address www.agric.wa.gov.au/pome-fruit/management-european-red-mite-western-australia

Learmonth SE 2016, *Miticides for WA deciduous fruit trees*. Department of Agriculture and Food web address www.agric.wa.gov.au/pome-fruit/miticides-wa-deciduous-fruit-trees

Malipatil MB, Williams DG & Semeraro L 2009, *Pests of pome and stone fruit and their predators and parasitoids — a pocket guide*. Department of Primary Industries, Victoria.



TABLE 2 Pest mites at "infestation" levels in orchard blocks monitored

	Pome fruit				Stonefruit			
	TSM*	ERM#	Erios^	Bryobia	TSM	ERM	Erios	Bryobia
Perth Hills	0	0	0	0	3 of 12	3 of 12	3 of 12	0 of 12
Donnybrook	1 of 5	0 of 5	3 of 5	1 of 5	2 of 7	0 of 7	4 of 7	3 of 7
Manjimup/ Pemberton	1 of 7	7 of 7	3 of 7	0 of 7	0	0	0	0
Total	2 of 12	7 of 7	6 of 12	1 of 12	5 of 19	3 of 19	7 of 19	3 of 19

*TSM = two-spotted mite #ERM = European red mite ^Erios = Eriophyids: apple rust mite on pomefruit; plum rust mite on stonefruit

Source: DAFWA



ANN Lyster, David Windsor and Nardia Stacy celebrate at The Herdsman retail launch (Photo: Peter Maloney DAFWA).

A star is born



BY NARDIA STACY
EXECUTIVE OFFICER, FRUIT
WEST CO-OPERATIVE LTD



ANABP 01[Ⓢ] variety and Bravo[™] fruit have been taking centre stage in WA for the last month or so, with a three pronged launch approach to introduce the variety and trademark to the world.

The formalised naming launch took place on 6 April by the State Minister of Transport and Agriculture Dean Nalder, Bravo[™] was announced as the trademark.

Mario Casotti, local grower was primed to support and promote the advantages growing of the variety Bravo[™] to potential growers, country wide.

Over 40 local and Eastern States growers attended a variety and trademark grower field day in Manjimup on 18 April, 2016.

Details of name, brand and market strategies were presented, along with field trips to see fruit on the trees at Casuarina Valley and Newton Orchards

along with a pack house tour and demonstration at Newton Orchards. Following the field day, the first commercial pick revealed that the variety was performing well producing heavy yields and had the matching quality indicators.

Finally, on 10 May a successful retail launch took place which has generated much public excitement. Consumers have been fascinated by the apple's unique story, bold branding, point of difference in colour, backed up by its excellent taste.

The apple is delivering all its promises and is set to be the next Australian premium apple on the global stage, so far an overwhelming success story for the pioneer growers. (())

MORE INFORMATION ►

Trees are still available to all commercial growers and orders are being taken for 2017 plantings please contact myself if you are interested or wish to discuss the variety.

For further details please contact Nardia Stacy on (08) 9368 3869 or email nardiastacy@fruitwest.com.au



Quotes

"It's not an easy decision to plant a new variety, my biggest concern is will it colour. I'm happy with the colour, it is right up to expectation and the taste is excellent — I am very happy."

John Vetta, La Valle Orchards, Perth Hills

"This apple is a taste sensation that dares to be different. People are loving the apple, the distinctive colour, the amazing taste. Not since the success of Pink Lady[™] has the apple industry had such a promising opportunity."

Ann Lyster, Lyster Orchards, Manjimup

"This apple is 20 years in the making and is potentially the best performing apple I have seen. It is an absolute credit to the world class apple breeding team at the Department of Agriculture and Food WA. This apple is so good — it makes me want to cry."

Mario Casotti, Casuarina Valley Orchard, Manjimup

"It's a very exciting opportunity for growers, my view and my family's point of view, it is really rewarding to know we are growing something that is so healthy and very much part of a staple diet. I hope that this apple will kick-start the export of apples in WA."

Harvey Giblett, Newton Brothers Orchard, Manjimup

"With massive export potential, Australian Bravo[™] fruit will be first into the international market and we see capturing the export opportunities that abound, as the game changer the Australian apple industry needs."

Ben Darbyshire, Chairman Fruit West Co-operative



Department of Agriculture and Food

