Around the Orchard

Newsletter of the Apple and Pear Growers Association of South Australia Inc.
in conjunction with the Cherry Growers Association of South Australia Inc
5 Plummers Road, Lenswood, S.A. 5240
Ph: 08 8389 8453
Website www.apgasa.com
Editor: Susie Green

Vol.11 No 1. January/February 2019

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- F model: (narrow orchard) ideal for work in small-sized, narrow-lane orchards.
- GE model: (low orchard) ideal for work under low orchards and overhead trellis systems.
- GT model: (large orchard) for use in standard-size orchards and in open-field cultivation.

Summertown Ph: 08 8390 3017
Gepps Cross Ph: 08 8139 7200
Email: admin@landinicentral.com.au
www.landinicentral.com.au

Key Dates

Wed 6 March 2019, 1pm - 5.30 pm - next Future Orchards walk. Venue TBC

Thur 7th March 2019, Cherry Postharvest Meeting

Tues 12th March 2019, Apple & Pear Growers ladies dinner

24 - 26 June, 2019 - Hort Connections, Melbourne

Rainfall

(*Rainfall for the month - 31 Jan 2018, source BOM*)
Ashton - 0.4 mm (*avg 42.8 mm*)
Cudlee Creek, Milbrook Reservoir - 0.3 mm (*avg 27.4 mm*)
Kalangadoo - 1.4 mm (avg 28.2 mm)
Lenswood - 0.0 mm (*avg 30.2 mm*)
Loxton - 5.0 mm (*avg 18.8 mm*)
Prospect Hill - 1.2 mm (*avg 28.0 mm*)
Uraidla - 0.0 mm (*avg 34.3 mm*)
Woodside - 0.0 mm (*avg 24.6 mm*)

Around the Orchard is published by the Apple & Pear Growers Association of South Australia and the Cherry Growers Association of South Australia

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Cherry Promotions

Cherry Growers SA's state promotions this season were largely focused on media, with a number of articles and stories of interest in mainstream media in the lead up to Christmas and a strong social media push after Christmas. With Hort Innovation funding, Cherry Growers SA commissioned some high quality photos and short videos showcasing cherries as a summer fruit, with consumers enjoying sharing cherries at the beach, on a picnic and after exercise. These were shared through the Cherries SA facebook page and also had high profile on the South Aussie with Cosi facebook page. The targeted social media promotions reached more than 75,000 people. These images and videos will be made available to all Cherry Growers SA members for your own use.

This season, new updates to the Fresh Cherries App were avaiable to map participants, to enable them to update their own details for the App online, and importantly show when they were open and closed. There were a few teething problems, with some glitches in the Android version of the App, but they are now resolved and the updates are proving to be a valuable feature of the App. It is up to each orchard to keep their own details up to date. It is noted that a few orchards were not making updates to their opening and closing times through the season. If you need assistance with how to update your own details or have lost your login details, please contact Susie Green.

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Fruit Fly Outbreak Declared in Loxton

An outbreak of Queensland fruit fly (Q-fly) has been declared in Loxton following a detection of seven flies in the area on 6 December 2018. There has since been a 400m extension to the southern boundary of the outbreak area due to a larvae being detected inside the original outbreak area.

An outbreak area has been established around the outbreak centre. Host fruit cannot be removed from properties inside the outbreak area. A 15 km susepnsion area has also been established beyond the outbreak area. Commercial growers within the suspension area can apply treatments under accreditation to move fruit.

Key fruit fly treatments available for apples, pears and cherries within a Suspension Area include:

- Pre-harvest Baiting and Inspection (ICA-56). Only accepted by NT, VIC, NSW and SA markets outside of the Riverland.
- Cold Storage (ICA-07).
- Fumigation with Methyl Bromide (ICA-04).

New ICA arrangements require an application being made to Biosecurity SA with up to 10 days processing time. For further information on treatment options see http://www.pir.sa.gov.au/__data/assets/pdf_file/0011/336818/FAQs_for_Commercial_Growers_-_Loxton_Fruit_Fly_Outbreak_December_2018.pdf

To view a map of the 1.5 km outbreak area see http://www.pir.sa.gov.au/__data/assets/pdf_file/0005/336497/Loxton_outbreak_area_web_map_extension_18_Jan_19.pdf

To view a map of the 15 km suspension area see http://www.pir.sa.gov.au/__data/assets/pdf_file/0003/336495/Market_access_map_extension_1.pdf

For further information on the outbreak see http://www.pir.sa.gov.au/biosecurity/fruit_fly/outbreaks_detections/loxton

Hort Innovation seek your say on new strategic direction

Hort Innovation are asking industry stakeholders to provide their input on the direction of the new corporate strategy.

Under the leadership of CEO Matt Brand, a national roadshow of consultation workshops will kick off in New South Wales at the end of this month, visiting all states and territories, concluding in April.

Matt said these workshops will offer the opportunity to learn more about how Hort Innovation currently works to invest levy funds, and to freely discuss views and ideas on how it can be done better in the future to meet the needs and priorities of the sector.

"We are inviting our members, levy payers, industry bodies and horticultural growers nationwide to take part in consultation workshops that will help to determine our new strategic direction," he said.

"The new strategic plan will strengthen the way our organisation works from the top down – and we want to ensure that our growers are at the forefront of the new strategy."

An online ideas portal has also been set up to allow contributions from those who cannot physically attend.

The new corporate strategy will come into effect around mid-year informed by ideas from growers, industry bodies, and online feedback.

The workshops are free to attend but registration is required. An additional workshop is being scheduled for South Australia in the Adelaide Hills in March, with date and venue to be advised shortly.

For information go to https://www.horticulture.com.au/hort-innovation/the-company/corporate-governance/hort-innovation-new-strategic-plan/

ORCHARD UPDATE

February 2019

ATTENTION CHERRY GROWERS!

This is your livelihood for next year and these buds need your attention NOW! Next season starts right now. If you want to maximise your yield and your fruit size, you must look after these potential fruit buds now. Post Harvest Nutrition is a small and simple management input that makes a huge difference to your crop potential next year.

For a tailored program to suit your individual crop please contact:

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www.eem.com.au

Family and Business Support Program

South Australia's Family and Business (FaB) Support Program supports the health and wellbeing of communities in South Australia affected by severe weather events.

FaB support mentors are based in or near the drought affected areas of upper Eyre Peninsula, Murray-Mallee, Upper North, Eudunda- Worlds End district and the pastoral areas and this program has now been extended to the Adelaide Hills to support growers affected by hail storm damage.

The FaB support mentor appointed to the Adelaide Hills is Colleen White, who is experienced in discussing and addressing the wide array of difficult issues that come about as a result of severe weather and other adverse events.

Colleen is available to respond to direct requests for help from people or from others concerned about the wellbeing of a family member, friend, neighbour or client. This service is provided at no cost to producers. Colleen will also attend industry events to get to know the community and will be available to assist in other ways. If you are looking for someone to talk to in a confidential manner or are concerned about someone, please contact Colleen on the details below.

FaB Support mentor – Hail storms
Region: Adelaide Hills
Mentor: Colleen White
Phone: 0409 388 649

The South Australian Cherry Industry…… where to from here?

Article by Nick Noske, President Cherry Growers SA

With the 2018/19 cherry season behind us, it's time to look back on what went well and what didn't go so well. The following paragraphs reflect both my own experiences and those of other growers who I exchanged information with over the course of the season.

The season started off looking promising with a nice crop set on just about every main variety. This "promising" start was dealt a savage blow with yet another year of hail damage. Some blocks had only minor damage while others were severely impacted.

Immediately after the hail event had subsided, birds in plague proportions (or so it seemed) appeared in the district. The sheer numbers of birds were virtually impossible to control. Losses ranged from nil under permanent net to 100% in the worst situations with the average reported to be around 20 to 30%.

In my opinion, if we want to be serious about sustainably growing cherries in this district in the future, permanent bird is a 'must have' investment. In our situation, we have both permanent bird net and drape-over net. I've realised that if we can't cover the balance of orchard with permanent net over the next few years, then any un-covered blocks may as well be pulled out.

Exports
On the export front, it was a successful year. National cherry production is now consistently well above domestic consumption. The view nationally is that without the recent market access achievements (China, Vietnam) and participation in exporting well up on previous years then the domestic market would have been nothing short of a train wreck.

Not all growers believe they benefit from all the effort and focus on exports. However, without exports, the likely result would be a huge oversupply of cherries on supermarket shelves at "give away" prices, well below the cost of production. Cherries being sold below the cost of production impacts everyone in our industry, regardless of the business you have and is simply not sustainable.

Demand
This season also highlighted the market demand for firm fruit over softer fruit with a significant price difference between the two. Unless your target market is 'pick-your-own', GA has become an essential component in our production systems.

Competition
I did everything I could to grow large, firm, quality fruit but still struggled to keep up with buyer expectations. The quality of fruit being produced particularly by our international competitors continues to reach new benchmarks. We must continue to strive to do much more to meet buyer expectations or they will go elsewhere.

Cherry growing is a competitive business and if you stand still, someone else, maybe a fellow South Australian grower, maybe a grower from another state will overtake you. If we are not focused on continuous improvement to meet buyer expectations, we will end up so far behind, that we may not be able to catch up.

Where to from here?
The past season has re-enforced some of things about the South Australian industry that I've been thinking about for some time.

1. The main Adelaide Hills production areas are among the best production areas in Australia and have some advantages over Tasmania.

2. The Lenswood and Forest Range area has a similar harvest timing to Huonville in Tasmania. Lobethal may well be later.

3. The South Australian cherry industry needs to decide where it wants to be in the future. Just pre-Christmas or export focused?

Considering the above three points and applying them in the context of growing cherries under permanent bird netting and using GA; for us, this meant our main production window is pushed well passed Christmas.

If we transition to earlier varieties, we need to consider another set of factors such as lower yields and an increased propensity to cracking and a shortfall in grading and packing capacity Christmas week. We simply will not see the high yields we have come to expect from Stella and Lapins from early varieties.

It's my view the industry needs to have a really good look at the economics of both scenarios and collectively come up with a strategy. When developing our strategy, we will also need to consider the volume of early varieties planted in Australia which are not yet in production and our opportunities in the export market post-Christmas.

I honestly believe there are tremendous opportunities in cherry production in coming years for growers of all sizes. Success will require that we maintain our focus on three key things:

First, we must put the customer experience first. Whether that's a 'pick-your-own' experience or selling fruit to Australian or overseas buyers, they must have access to a premium product. We must work hard to ensure that demand for our fruit continues to grow and is highly valued by our customers.

Second, we must continue to open up international markets to ensure that the returns to cherry growers remain strong.

And finally, we all need to look critically at our ourselves and our businesses. If we are truly serious about growing fruit that is equal or better to that produced elsewhere, we have to look at what we can do and what we need to invest in to achieve this.

Article by Ryan Sheridan - Agronomics, Omnia Specialities Australia

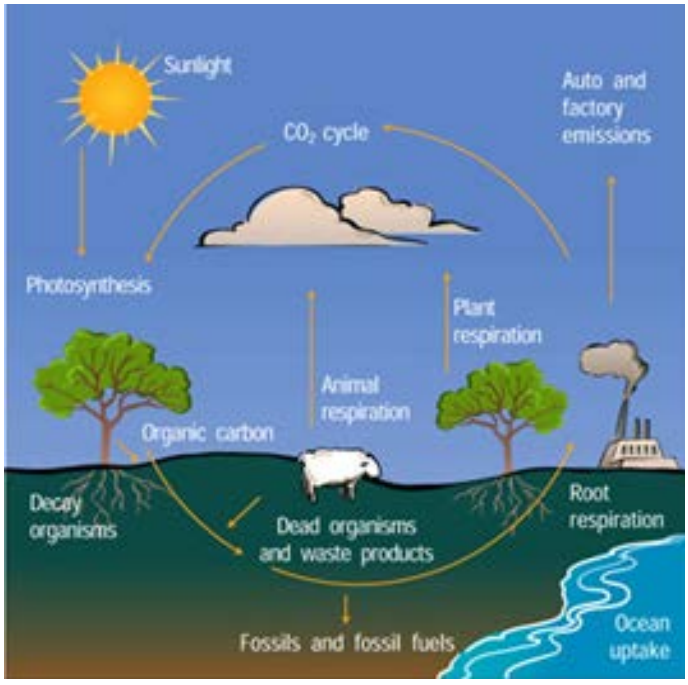
Soil carbon. Why is it good, how can it impact our environment and what does it mean to farmers?

Soil organic carbon exists in many forms and many compounds each with varying qualities and impact the carbon cycle in different ways. Most of the worlds carbon bank is locked up in soil (referred to as carbon sequestration). Soil carbon is currently twice the size of atmospheric carbon. Soil carbon is currently reducing and entering the atmosphere, creating stress to the ozone layer. Soil carbon levels are reducing due to agricultural practices. Improvements in agricultural practices provide a great opportunity to reduce carbon emissions, improve soil health and improve yields and sustainability.

Active carbon is the component of organic carbon that is freely available for microbes to feed from. With differing carbon compound structures the effect is somewhat varied and as such soil carbon levels need to be more detailed to reflect the effectiveness of carbon. This impacts the carbon cycle by allowing a food source for microbes that increases enzymatic activity (B-Glucosidase) to increase carbon cycling.

The carbon cycle is a critical component of our existence on earth. It is the process by which carbon is cycled in and out of the various earth spheres and understanding of the carbon cycling is critical for sustainable crop production and the future of our existence on the planet.

THE CARBON CYCLE



As soil can remove CO2 from the atmosphere and provide agricultural benefits the Australian government has implemented strategies to maximise incentives for farmers to assist with this sustainable approach. The aim of the Emissions Reduction Fund (ERF) is to encourage farmers to reduce their carbon emissions into the atmosphere through better agricultural practices by the allocation of carbon credits to farmers engaging in the incentive (see http://www.cleanenergyregulator.gov.au/ERF for more info).

Farming practices are very important in influencing soil carbon sequestration. Methods such as livestock management, residue management, soil tillage and crop rotations all have variable impacts on soil carbon diversity and overall levels. Furthermore, the quality of farming inputs such as composts, manures, biostmulants, biosolids, mulches and organic inputs play a key role in carbon usage in the soil and also its realease to the atmosphere. Hence their impact on carbon cycle.

Different carbon compounds have different impact on soil properties. Organic substances added to the soil as an ameliorant offer different benefits with the final compounds created after their decomposition in variable times. Highly lignin products have a lower rate of decomposition. On the other hand, the use of biochar possesses a high content of carbon but a compound structure that has little benefit for soil health (in comparison to a more labile compost with less carbon or a humic acid that is high in active carbon).

Furthermore, the use of active carbon inputs plays a role in reducing fertiliser applications such as nitrogen that contributes to lesser greenhouse emissions and better soil health.
With regards to greenhouse emissions it has been measured that with soil carbon contributes 5-14% or the total greenhouse emissions but have the potential to mitigate 89% of carbon with soil carbon sequestration (Smith et al., 2007). Within Australia it is estimated that up to 60% of soil carbon has been lost which is approximately 8.4% of greenhouse gas emissions (Chan et al, 2009).

In summary, soil carbon sequestration will potentially improve soils health and provide valuable food source for microbes. This in turn will improve fertiliser efficiencies and improved disease and stress resistance. Furthermore, with developed practices farmers have capacity to contribute to reduced greenhouse emissions.
When applying organic inputs, understand they all have different characteristics. More labile sources will act relatively quickly (such as a quality humic acid not a poor quality imitation of K humate (https://www.omnia.com.au/products/k-humate-26)!!).

Contact Ryan on 0400 398 504 or ryan.sheridan@omnia.net.au for more information.

A hive of activity in the Adelaide hills

Article by Nick Gellie, Andrew Lowe and Katja Hogendoorn, The University of Adelaide.

Researchers from the University of Adelaide and volunteers have been busy planting native vegetation throughout the state. This vegetation has been specifically targeted to encourage crop pollinators. Recently this enthusiastic group have been working with apple growers in Adelaide hills, NRM boards, restoration practitioners and APGASA to help design and plant native revegetation that will support bee and other insect pollinators of apple.

The Project

Without the pollination services provided by wild and managed bees, many fruit and nut crops would be unproductive. It has been estimated that the production of two thirds of horticultural crops in Australia benefits from pollination services. However, pollinators are in decline. Due to land management practices significant amounts of native habitat have become fragmented and degraded. This reduction of natural ecosystems has caused many pollinators to experience nutritional deficiencies. As a consequence, globally, growers of pollination dependent crops have become increasingly dependent on managed hives.

To identify and address these pollination deficits Agrifutures Australia through the Rural R&D for Profit program is overseeing a national project that improves the food support for crop pollinators in agricultural landscapes. The project titled "More productive agriculture: guidelines for effective pollinator management and stakeholder adoption" includes a research team from the University of Adelaide led by Dr Katja Hogendoorn. The Adelaide team investigates the identity of crop pollinating bees, the other plants that these bees rely on in the landscape and then establishes demonstration sites to enhance pollinator habitat adjacent to focal agriculture (e.g. apple, lucerne, almond and canola). Later, the team will assess changes in pollinator abundance, diversity and effectiveness to deduce the benefits of this revegetation strategy for pollinator dependent crops in South Australia.

A case for supporting pollinators in the landscape

To maintain healthy bee populations a variety of resources are required in their habitat (e.g. nesting substrate, nectar and pollen). Flowering agricultural crops lack the nutritional breadth that bees need, and after crop flowering, there is often very little alternative food for pollinators in agricultural landscapes.

Some native plants are nutritionally rich and provide both pollen and nectar to pollinators. In the Adelaide Hills, these include, for example, the native peas, daisies, Eucalyptus, Banksia, Hakea and Bursaria species. Though beneficial some of these species are not suitable to use in plantings for pollinators, because they produce little seed and are difficult to propagate or are slow growing. Also when applying these plants in an agricultural setting it is important to select species that do not support crop pests. Targeting revegetation adjacent to agriculture to support pollinators and enhance crop production (i.e. both yield and quality) has been used for many years in Europe and the USA. However to date this land management strategy has not been developed for Australian crops and cropping regions.

Targeting restoration to attract pollinators in local growing conditions

Although international research indicates that revegetation can be a viable land management practice to benefit both production and biodiversity some fundamental knowledge gaps remain. For example the species of pollinators, their efficiency and the plants they rely on vary between regions. Hence when choosing and applying plant species to benefit agriculture there is no one size fits all. The plant species selection needs to be specifically tailored to the nutritional and habitat requirements of the pollinators and these choices need to be cognisant of the crop and landholders needs.

Site and species selection

A survey of growers, local orchards and farming practices in the Adelaide Hills Apple growing area found a property on Collins Hill Road run by Simon Collins and family as the most suitable location for the project. So a list of native plant species for the project were compiled from Stringy bark eucalypt woodlands (i.e. the dominant native plant community prior to orchards being established) on the Collins hills property.

The species list was further refined on their ability to provide bees with pollen and nectar rewards, flowering time and their ease of commercial seed collection and propagation.

Figure 1

Furthermore, existing revegetation provided overstorey at the Collins hill property and allowed a mix of under-story species to be selected and planted (e.g. that included clockwise Figure 1. Eutaxia microphylla, Wahlenbergia stricta, Hakea rugosa, Chrysocephalum apiculatum and Hardenbergia violacea) amongst others.

Upon discussing the project with orchardists a primary concern was that replacing large trees (e.g. eucalypts) at the orchard margins would encourage roosting points for bird pests. Therefore vacant margins between the groves on Simon Collins farm and the neighbouring property run by Brenton and Ashley Green were seen as more suited to planting hedgerows. Clumping mid-story species such as Callistemon, Melaleuca and Bursaria were selected for this application.

Supporting pollinator diversity and abundance by planting and enhancing their resources.

Land abutting the orchards on the Collins Hill property provided an opportunity to trial two of the most common methods of active revegetation that are available to landholders (direct seeding and tubestock planting). Direct seeding (Figure 2.) requires the application of seeds directly into soil during a mechanical rip of the ground. This method is economical and has had good success when used in Mediterranean type climate found in southern Australia (e.g. 4500 ha of restoration has been achieved in SA by industry partner Trees for Life). Therefore direct seeding was chosen as the best way to plant hedgerows on the Collins Hill property.

Figure 2. Direct seeding at the Collins hill property (photo credit Dennis Hayles).

As an alternative strategy the researchers also used wild collected seed to rear tubestock of understorey species in a commercial nursery. These plants were then directly planted (Figure 3.) into the ground under an existing overstorey of eucalypts that abutted the orchards on the Collins Hill property.

Figure 3. Planting day in the Adelaide hills (photo credit Nick Gellie)

Monitoring the demonstration sites to improve adaptive management

The demonstration sites have now been established and a brochure about planting hedgerow, understory or larger areas of vegetation to benefit the bees that pollinate apple flowers will be produced as part of this project.

However, to investigate the relationship between native vegetation, pollinator diversity and abundance, and apple productivity the researchers will observe what happens in the field over time. So, depending on future funding, changes in the diversity and abundance of pollinators and crop pests will be monitored during growing seasons and the associated changes in the quality of fruit set will be measured.

In the future the data coming from these and other plantings will give growers the ability to make informed decisions about the benefits of using pollinator habitat as a land management strategy in their farming practices.

More information

Project website: https://www.agrifutures.com.au/partnerships/rural-rd-for-profit-program/securing-pollination/#

Project video: https://vimeo.com/271022981

Selecting plants for pollinators: If you interested in attracting pollinators to your orchard and want to know what to plant for the coming winter, please contact Nick Gellie (0448159203) or Katja Hogendoorn (0409728869).

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Churchill Fellowships Now Open

A Churchill Fellowship provides an opportunity for talented Australian Citizens to travel overseas to investigate inspiring practices they're passionate about to enable the exchange of knowledge, technology, and experience for the benefit of Australian Society.

It is for anyone who has exhausted alternatives within Australia and would like to see what other countries are doing successfully in a similar space to inspire new ideas, innovation, and excellence.

The Churchill Fellowship provides a pathway for Churchill Fellows to access expertise from around the world that is not typically available to everyone, and there is a high level of visibility and credibility associated with being a Churchill Fellow.

No prescribed qualifications are required in order to apply for a Churchill Fellowship, however, and the subject of your proposed project is limitless provided a benefit to Australia is evident and a willingness to share the knowledge gained with Australia is displayed.

100 Fellowships are available for award in 2019. Applications open Friday 1 February 2019 and close 30 April.

For more information on the program and how to apply, go to https://www.churchilltrust.com.au/application-process/how-to-apply/

Grey-headed Flying-foxes

With increasing numbers of Grey Headed Flying Foxes (Fruit Bats) finding their way into orchards, it is possible that they may become caught and entangled in netting - particularly throw over style netting.

It is important to be very careful with Grey-headed Flying-Foxes as they and other bat species can carry a rabies-type infection called Australian bat lyssavirus. Australian bat lyssavirus is a rabies like virus transmitted from bats to humans. Infection with the virus is invariably fatal. There have been three cases in Australia since 1996, all of which were fatal. The last case occurred in Queensland in 2013.

The virus is spread commonly through a bite or scratch, but also through exposure to bat saliva through the eyes, nose or mouth. If treatment is delayed until after the onset of the symptoms, there is no known cure and the condition is fatal.

What to do if scratched or bitten or come into contact with bat saliva?

- clean the area with soap and water for at least 5 minutes
- apply antiseptic such as povidone-iodine
- contact a doctor or hospital emergency department
- commence a course of post-exposure prophalaxis if necessary.

Bats must only be handled by an appropriately trained and vaccinated person. People who come across a dead, sick or injured bat should not touch the bat and should contact Fauna Rescue's 24-hour Helpline on 8289 0896 to arrange for removal of the bat.

Do NOT handle the bats with bare hands, even if they are dead and make sure that they are disposed of in a manner that pets or other animals cannot come into contact with them.

For further information contact the following:

Health Protection Programs, SA Health
Telephone: (08) 8226 7100
Fax: (08) 8226 7102
Email: HealthProtectionPrograms@health.sa.gov.au

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