

# From gold rush to greenlife

By David Reid: Nursery Industry & Development Officer, NGIV

Originally founded on the back of Victoria's gold rush, Hoddles Creek is now known for producing a different commodity. From advanced trees down to tubestock, the area is now home to some of the largest and most productive nurseries in the country.

**E**stablished in 1985 and celebrating its 30<sup>th</sup> anniversary this year, Carawah Nursery is one such venture that has made an understandable impact on the Victorian and national horticultural landscape. Carawah Nursery is the product of Directors, Grant and Jannette Rankin, who each play integral roles in the day-to-day operations on site.

The steep, south sloping block would be a challenge for many owners, but the couple has created both a successful business and a loving home for their two children, William (6) and Virginia ('Gracey', 5), that many would be proud of. The Rankins purchased the business 9 years ago, but prior to that lived and worked on Jannette's family's property in Virginia, USA. The couple's conditioning on Janette's 800-acre nursery, growing product predominantly in three-gallon containers (12in. pots) prepared them for their Australian project. Since their

return, Carawah Nursery has specialised in Australian native tubestock, but with openness to other opportunities as they present themselves.

"Things we are doing here are on a slightly smaller scale", relative to Janette's family nursery, but with that scale reduction comes an ability to focus on quality and the capacity to personalise the transactional nature of nursery business.

The operation grows a large selection of retail and landscape varieties of native plants, and with nearly 600 varieties available, there is sure to be a plant they propagate to suit most needs. The market for their native tubestock is mostly to wholesale growers, who then grow on and distribute to retail nurseries, but landscapers and councils regularly approach them for supplies and their affable nature and excellent stock quality sees many repeat customers.

In its large catalogue, Carawah Nursery grows select varieties from renowned breeders and collections including Bywong, Aussie Winners, Aussie Colours, Ozbreed, Mallee Collection, Fair Dinkum Flora and Austriflora, to name but a few.

Grant Rankin affirms, "It is the Carawah quality commitment that we are continually striving to uphold. Propagation comes with its challenges no doubt, but we are proud of the lines that we produce, the difficult lines especially. *Grevillea gaudichaudii*, Grevilleas 'Bronze Rambler', 'Royal Mantle' and others that are notoriously uncooperative, are products that we take pleasure in knowing that we can produce in sufficient numbers for our customers".

While Grant studied a Bachelor of Applied Science, majoring in Horticulture at Burnley, Jannette too was schooled in Horticulture, but majored in Theatre and Communications at Virginia Tech. This diverse complement of skills, coupled with the support offered from their staff, ensures this business can meet any challenge. As with other top nurseries in the country, Grant recognises that "our staff are the key reason we have been able to grow the business to where it is today".

When Carawah Nursery first started they had an apprentice and a part time working parent, sticking cuttings for three hours a day. They have now grown into a business that averages 12 staff per year, with a plan to recruit another apprentice in the near future.

When Grant and Jannette purchased the existing business in 2006, they did not hold accreditation and they were not a member of the nursery industry association.

"Since becoming a member, which has been great, the natural progression was to become NIASA accredited. It was a challenge for us to step up and tick the boxes required, but it has well and truly



Rejuvenated dam and solar power for the nursery



been worth the effort. Water treatment, computer software development, stock management and general nursery hygiene - it has all lead to a far better working environment for our staff and a better production facility for our plants". Their business decisions over the years, in many ways, are validated as much as they have been guided by their NIASA accreditation.

Their business values also mirror NIASA's mantra of constant improvement and risk minimisation. The purchase of a diesel automatic backup generator for the property, SMS notifications of nursery variables and the installation of a disinfection system are just some examples. Other changes that will contribute to the sustainability of their business include the recent investment in solar panels for the property, a dam rejuvenation project and solar powered pumps.

Carawah Nursery was also a proud finalist in the Stormwater Victoria Excellence Awards for Excellence in Integrated Stormwater Design, with the development of a comprehensive water recycling system, harvesting rainwater and irrigation runoff from all greenhouses and growing areas. Capturing and recycling irrigation water and surface flow is an undeniably obvious investment to make. However, if you do adopt this strategy you will need to be aware

that pathogens will require removal and daily fluctuations can occur in the waters nutrient content. Depending on irrigation and fertiliser practices (e.g. liquid Vs slow release), leachate can be a significant contributor to this. To counter these oscillations in water quality in a yearly production cycle, quality should be monitored the following times at least:

- soon after potting;
- once during winter and summer; and
- once during dry or wet periods.

It is essential electrical conductivity (EC), pH and nitrates/phosphates are measured when recycling water onto production areas. Other elements including sodium, chloride, bicarbonate alkalinity, boron, manganese, aluminium, iron and copper can also be regularly monitored if issues arise. Carawah Nursery does not require the use of many plant protection products, but their presence is another factor to consider when recycling water.

Carawah Nursery is also looking at creating some constructed wetlands, amongst other things, to ensure water is at its upmost quality. By controlling and manipulating water flows, including retention time (to allow for sediment and nutrient trapping) and depth of water, wetland functions can be optimised. Other than improving water quality, constructed wetlands can be effective in creating habitat for native fauna.

Nutrient levels vary greatly at different nurseries and at different times of the year, so regular monitoring and good management are necessary to maintain artificial wetlands and ergo the quality of recycled water.

Mr Rankin suggests that "another benefit of having NIASA and Ecohort is to demonstrate to our customers an achievement of nursery standards, giving them confidence in our production methods and our stock".

The accreditation has also complemented the many domestic quarantine accreditations they hold with the government's regulatory agencies, such as ICA29 and ICA42, which allows them to ship into Western Australia, Tasmania and South Australia.

One of the changes to government legislation that the business would like to see is echoed by growers nationally; the need for greater cohesion and harmonisation between State regulatory bodies, thus increasing efficiencies and providing a straightforward platform to allow growers access to interstate markets. The BioSecure HACCP risk management system is one such platform that could provide that into the future. It encourages a business to maintain strict internal quarantine procedures and to record the actions taken at critical control points within the nursery. With improved hazard analysis and control measures in place, the business is better protected in the event of a biosecurity threat or impact. The government agencies have validated BioSecure HACCP so, nationally, growers should look forward to further support to access domestic markets.



Tissue cultures and cutting fog house



*Agonis flexuosa*



Looking towards the future of the industry, “we feel there will always be great demand for Australian native plants and with an ever-increasing pressure on water supplies, demand should remain high. Fashions no doubt change and we are forever trying to identify them and adapt our product range to suit”.

Grant and Jannette value the importance of fostering strong connections, not only with their customers, but also with breeders and plant developers, so that they can be at the forefront of the next trend.

“Maintaining our quality, service, relationships, honesty and integrity are the major cornerstones of our business and our life. We see a bright future for the nursery industry, as green space is paramount for our happiness and survival. Constant challenges remain but from this come opportunity, for which we are always on the lookout”

One key to minimising the risk of water insecurity is through collecting nursery irrigation runoff. Water collected is free and stormwater runoff from buildings and hard areas can potentially be of better quality than existing sources.

To calculate the size of storage required, determine the area to be drained in square metres, the amount of rainfall (in millimetres) per time period and the amount of irrigation per time period.

**Drainage volume (litres) = (area m<sup>2</sup> x rainfall mm) + (area m<sup>2</sup> x irrigation mm)**

It is important to note, that if water is collected mainly from clean catchments such as roofs, the storage should be plastic lined similar to Carawah Nursery’s dam liner, to maintain quality. Small nurseries may be able to use concrete or poly tanks, depending on the amount of storage required.

Some nurseries, such as those on flat land or on sand, may not be able to drain to a single storage area, but sumps such as septic tanks with small pumping units matched to the runoff discharge and controlled by two level float switches can be put in series. The runoff can then be moved to a main storage using polythene or PVC piping.

*Further information on building storages can be found by contacting state/territory nursery associations.*



Tubestock growing on in a cold frame multi-span



A wide variety of native plants in stock



Grant, Jannette, William and Virginia (‘Gracey’)