

American Study Tour 5-16 July 2014

"One must travel, to learn. Every day, now, old Scriptural phrases that never possessed any significance for me before, take to themselves a meaning." Mark Twain 1869, The Innocents Abroad

In this month's Nursery Paper NGIA Policy & Technical Officer, Chris O'Connor reports on outcomes and some key highlights from the recent industry study tour to the United States.

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The Cultivate 2014 trade show covered 7 acres

Nursery and Garden Industry Australia (NGIA) recently conducted a study tour of America focusing on Green Infrastructure, Nursery Business Operations and the Cultivate Trade Show.

The tour which was partially funded through the Nursery Industry levy project NY13700 saw 10 people from the industry tour Los Angeles & San Francisco in California and Columbus, Ohio from 5-16 July 2014.

Green Infrastructure

A key element of the tour was to investigate the American take on Green Infrastructure, the utilisation of it, who the champions are and how they are promoting the concept to key influencers.

Three key advocate organisations were met with, these were; Sacramento Tree Foundation, Friends of the Urban Forest and Tree People. Each of these organisations has extensive involvement in urban forestry

and a history extending back more than 30 years, but each has taken a different path in the expression of their advocacy.

Sacramento Tree Foundation has a close link to the Sacramento Municipal Utility District (SMUD) which provides trees to its customers for the purpose of shading homes. This program is backed by detailed instructions of where to plant trees for maximum benefit. The Sacramento Tree Foundation has undertaken a great amount of work in researching and lobbying government to increase and protect the Urban Forest.

Friends of the Urban Forest (FUF) have a more grass roots approach to campaign for the urban forest. Situated in San Francisco they provide trees to local residents through organised local tree planting days. Residents pay a fee for the tree, which is supplemented through grants. The tree is managed through a maintenance program for the first few years of its establishment. FUF has recently focused some of its energy towards campaigning for a San Francisco Urban Forest Plan.

Tree People likewise had a grass roots beginning but has since evolved into an sophisticated operation. Programs include public education, demonstrations of technology and urban forestry and managing tree planting through its citizen forester programs as well as advocacy and natural restoration programs.

A large focus of the American push towards green infrastructure has been due to the



The study tour group in front of the floral Mickey Mouse at Disneyland

benefits seen in managing water, and that was clearly seen in the tours meetings with Kristy Morris from the Council for Watershed Health and Raphael Garcia from the San Francisco Public Utilities Commission. A key aspect in San Francisco is the fact that sewerage systems and storm water systems are combined, so during large storm water events sewerage overflows can occur. Increased urban forest coverage is being embraced as a means to mitigate the impacts of these rainfall events.

The tour also visited Disneyland in Anaheim for a behind the scenes tour with the parks horticultural team. The horticultural support for the operation was impressive with work commencing at 2am every day before the park opens. Horticultural Manager Rhonda Wood highlighted operational aspects including the difficulties they have in accessing some plants in the park, some of which are accessed by using the jungle boat ride. Director of Disneyland Resort Horticulture Adam Schwerner provided a presentation covering amongst other items the focus they have on managing Disneyland's urban forest, expansion of the plant palette and training & development of the parks horticulture team.

The tour also met with Graham Ray from Deeproot, who are the manufacturers of the Silvacell. Graham discussed with the group some of the challenges that occur when trying to incorporate trees into an urban environment. During this discussion Graham went through some of the processes he undertook to ensure engagement of all involved parties at the local government level. He also provided some great insights into the tools and techniques available to overcome some of the engineering challenges posed when trying to get trees into urban areas. Some of these are essential for our industry to be aware of in order to increase our market opportunities.

Nursery Operations

From a nursery perspective the tour visited four production nursery facilities in California. The first was a large family owned business Boething Treeland Farms. The operation covers 800 hectares over 3 sites in California. Production includes over 1200 plant varieties and supply of product is predominately to the landscape trade. Transport is conducted in house and the business has a fleet of trucks to achieve this. The scale of the operation was considerable however it was observed that there was limited mechanisation. This prompted a

discussion on how mechanisation was something that the business was actively seeking due to rising labour costs. By way of information the minimum wage in California increased from \$8/hour to \$9/hour on the 1st of July 2014 so this was quite new during the tour. Within 18 months' time the minimum wage will rise again to \$10/hour, placing more pressure on nursery operators.

Armstrong Growers was the next operation the tour visited. The company has three production sites and owns 31 Armstrong branded Garden Centres, as well as owning the controlling share of Pike Nurseries in Atlanta which operates 16 Garden Centres. The company has a vertically integrated structure whereby the production nurseries supply approximately 45% of the stock in the operations garden centres. The rest of the production material is supplied by other growers. Armstrong Growers also supplies plant material to other garden centres and landscapers as well as large resort operations.

The business has a number of partnerships for example they act as an agent for Monrovia and allow for consolidated freight deliveries through cross docking. The site at San Juan Capistrano also features a new landscaper's drive through service.

One aspect that was of note was that Armstrong Growers is an employee owned company whereby employees own a share of the business through an Employee Stock Ownership Plan (ESOP). Each year more than \$2 million is put into the plan from the production business.

Altman Plants was the next nursery on the tour. The business established in 1975 encompasses some 880 acres across 3 states and supplies major chains such as Home Depot, Lowes and Walmart. The business produces a wide range of bedding plants, perennials, roses, and over 800,000 poinsettias. The site we visited at Vista covers 675 acres of production with 3 million square feet of greenhouse which is supported by 400 employees, 30 miles of roads and a 4 acre loading dock.

Drought has been a major issue for the Californians with the current drought being one of the severest recorded in the region. In keeping with this issue, General Manager Jim Hessler showed the tour the sites new dam and water recycling process. The total



Altman Plants Vista California operation cover 675 acres of production

capacity is 37 acre feet which equates to approximately 45 million litres of water. Jim noted that they had just upgraded their sprinkler systems after gaining a grant from the local water authority and had seen a resulting reduction in water use.

One of the most interesting aspects of the Altman operation is the use of robotics. The site has 8 HV-100 robots from Harvest Automation which are used to space out plants. The robots are transported to various locations on site on a customised trailer and are managed by a "robot wrangler" who manages the robots and ensures they are functioning. These are partnered with a trike forklift which has specialised tines which allow for the bulk movement of potted plants. According to Jim Hessler the staff have quickly accepted the robots which have each been individually named. It allows Jim to free up labour to focus on more value adding / productive tasks and in light of the rising cost of labour this is essential.

The final nursery operation the tour visited was Valley Crest Tree Company. The Valley Crest Tree Company is one division in Valley Crest Landscape Companies, a business which includes Landscape Design, Installation and Maintenance as well as Tree Care and Golf Course Maintenance. In a release on the 1st of July 2014, the business announced that it had completed a merger with its largest competitor The Brickman Group. This new business entity has over 20,000 employees and has estimated that its turn over for the 14/15 financial year will be in excess of \$2 billion dollars. To say that our tour was impressed by the scale, quality and professionalism of this operation is an understatement.

Our host at Valley Crest was Robert Crudup Jr. who is the president of the Valley Crest

Tree Company. Robert stressed the central importance of business and production processes in his business. He noted that he had no problems with competitors visiting the site and seeing his production practices, because he knows they do not have the business disciplines in place to execute and do it right. Robert noted that they may emulate his practices for a month or two but could not sustain it. Robert also emphasised the importance of quality, an example he cited was during the Global Financial Crisis, Valley Crest put \$5.7 million dollars of stock into the chipper because

they were not able to be sold and their quality would suffer. This commitment to quality has also seen them work with key experts such as Ed Gillman and become contributors to quality standards. The business also has a number of ISA certified arborists on staff in a variety of roles including sales. This helps to solidify customer relationships and also helps Valley Crest to understand client needs.

The commitment to quality certainly pays dividends, Robert noted that his prices were at the premium end of the market but



Valley Crest Tree Company demonstration of modified pot in pot system including air pruning.

the Valley Crest name and commitment to quality justifies this. Robert also noted how he undertook a lot of marketing upstream of the landscapers to those specifying the stock such as landscape architects. After seeing the quality of the stock and understanding the production process they are happy to partner with Valley Crest for their tree stock requirements.

Valley Crest Tree Company produces tree stock from 15 gallon pots through to large 72" timber boxes with their main market being 36" 48" and 60" boxes.

Dave Teuschler the Technical Services Manager walked the tour through their propagation process which is relatively new. The seed or cutting material is propagated directly into 65mm pioneer tube pots which are air pruned. They have found that by doing this they have limited root defects and have achieved great growth rates.

This tube stock is then potted up into 1 and then 5 gallon pioneer pots. These are again air pruned but are also placed into a modified pot in pot system using the solid walled pots. This limits the impact of wind desiccating the roots but provides the benefit of air pruning.

Production Manager Brad Bowers then gave a demonstration on formative pruning and their use of wire stakes instead of wooden stakes. The theory behind this is that the wire provides a high degree of flexibility to support the trees growth and development compared to the rigidity of a timber stake. The wire is also reusable and won't rot. Throughout the tour it was evident that savvy manufacturing principles were in place. The catch cry of "touch it one time" was heard numerous times and could be seen in the delivery of pots on site. Rather than having all pots in a central location the different size pots were located at the points where potting up was undertaken. This thinking is intrinsically linked to the ideal that each time a plant is touched it should provide some form of value add, for example potting up or pruning, rather than moving a plant.

Overall the Valley Crest Tree Company is an inspiring operation and one which the tour was privileged to have seen.

Cultivate 2014 Trade Show

The Cultivate trade show is an evolution of the previously well-known Ohio Short Course hosted by American Hort. The show which covers more than 7 acres provided the tour an excellent opportunity to see all that is new and exciting in the nursery production world. This ranged from new plant releases from the large breeders such as Proven Winners, Dummen group (Red Fox), Ball and Suntory through to new examples of mechanisation such as the Harvest Technologies HV-100 robots.

Cultivate also featured a number of education sessions and research extension sessions led by leading local academics. Some highlights of these sessions included;

- the use of Unmanned Aerial Vehicles (UAV's) or drones to obtain accurate inventory counts of nursery stock
- Using RFID to manage stock in a tree production nursery

- The use of remote sensor technology to manage irrigation applications. Research in this area also included the use of irrigation control to manage plant growth without the use of PGR's
- The use of LED light to provide supplemental lighting and to improve plug growth rates.

The preceding synopsis of the tour has just scratched the surface of the opportunities that were seen in America and the contrasts both good and bad to our own industry. The participants were all able to take something positive back to their respective businesses, so it was certainly a successful 10 days.

NGIA would like to extend our sincere thanks to our American hosts for their openness and warm hospitality during the tour. Thanks must also be extended to the tour participants for their enthusiasm, good humour and commitment to the tour and the industry.



The Harvest Industries HV-100 robot on display at Cultivate