



Know-how for Horticulture™

**USA nursery learning
tour, May 2003**

Richard Stephens
Nursery & Garden Industry
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Final Report
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Horticulture Australia

US Nursery Learning Tour

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Michael Danelon has written this report as part of the reporting requirements of Horticulture Australia Limited (HAL) and to provide information of the benefits accrued to the Nursery and Garden Industry by participating in the US Nursery Learning Tour. The final report is accompanied by a CD Powerpoint presentation produced by Greg Know of Alpine Nurseries Ltd.

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Media summary

The US Nursery Learning Tour took place from 8 May to 16 May with a total of 15 guided visits to production and retail nurseries and the J.R Simplot Company. Participants represented the NSW and Queensland State Nursery and Garden Industries with the majority of participants being growers from the shrub and tree sector whilst one participant was an allied trader with extensive industry experience.

The aim of the learning tour was to identify differences between the United States Nursery Market to that of Australia whilst determining the most beneficial information and/or technology to be acquired and implemented to improve the level of professionalism, profitability and hence viability of the Australian Industry.

Specific issues focused upon consisted of:

- general nursery practices
- stock scheduling
- scale of nursery operations
- regulatory requirements
- adoption of best management practice and nursery accreditation
- plant trends
- distribution and marketing
- nursery support network

The size of the production nurseries visited ranged from a specialist breeder and producer of camellias and azaleas (Nuccio's Nursery) covering 5 acres to the 580 acre head quarters of the largest wholesale nursery business in the United States (Monrovia Nurseries) which encompasses 4,724 acres in total.

The United States Nursery Market is clearly huge and operates on a national basis. The main growing regions are located within California and Oregon. The total operating size of the majority of production nurseries visited were considerably larger than those commonly operating in Australia, i.e. >30 acres.

Most businesses have adopted a corporate style of management and in part this is due to the influence of the chain stores. The ability to offer retail customers a comprehensive range of product at low prices and the buying power chain stores possess has led to suppliers being dictated to and price efficiency a necessity to maintain business. The Nursery Industry has responded by either aligning themselves with the chain stores or choosing to focus on non-chain store distribution and investment.

There was a range of highly profitable large businesses employing automation in addition to specialised smaller labour intensive high-profit businesses. Availability of labour was not considered an issue as unemployment is an issue, however workers compensation laws were being implemented which are likely to impact on the operations of nursery businesses.

Traditional water supply was from deep bores and access to it considered as low cost. Changes to water management or regulation of run off policies were seen as a major issue for producers. The delivery of irrigation and utilisation of recycling and water disinfection was seen as well below the Australian Nursery Industry standards.

Australian nursery operators were considered to be as advanced in the introduction of new automated equipment or as innovative in the operation and development of their businesses.

Most of the more successful businesses had a specific and sizeable sales force regularly meeting customers. Within this, specialists were engaged to assist the planning and marketing of their products to secure both sales and gain improved selling prices for products.

It is apparent from the emerging strength and influence of the chain stores within Australia that the Australian Nursery Market will need to respond similarly to that of the United States.

The likelihood of increased enforcement of water and environmental regulations within Australia could increase the adoption of industry best practice to NIASA. Further to this, NIASA may be seen to identify and differentiate more professional and higher plant quality than those nursery businesses without it to assist in building reputation and maintaining market share.

Expected outcomes and how they were achieved

A total of 15 guided visits were undertaken on the US Nursery learning Tour. A number of areas have been identified below which outline the observations gained from the visits.

General nursery practices

- There were few specialist production nurseries operating. The competitiveness and low profit margins of the nursery market does not appear conducive to the start up of new competitors given the risks associated with it.
- Fire Ant and the movement of this pest within areas is a major issue as it has had a major impact on trading and lifestyle. The advice from US was to act now and control the problem to maintain positives of outdoor lifestyles.
- The growing media used varied from specialist peat/pinebark formulations seen within smaller nurseries producing potted colour to use of soil as an ingredient and recycled potting mix. The main observation for the larger production nurseries was to use low cost ingredients and uncomposted sawdust and soil blends to limit input costs. Typical composting phases were 2-3 weeks in larger nurseries growing shrubs and trees.

- Inferior quality budget mixes and inconsistencies with batches required taller pot sizes to our equivalent pot diameters. The reasons were to assist with drainage and increase the growing media volume to offer a buffer to poorer quality. This seemed to allow a larger (vegetative) plant to be produced due to increased volume for root growth.
- Deaths of plants were quoted as low, i.e. <0.5% as a total percentage of plants produced. Plant deaths were typically returned into the compost soil mixes in largest nurseries primarily to reduce production costs but they were not considered as a perpetual disease risk either.
- Pest and diseases were similar to Australia however there was environmental pressures with respect to relative humidity in nurseries visited. In some nurseries, hand watering has assisted in lowering leaf wetness and offering some disease management options.
- The general nursery site hygiene was considered poor relative to Australian standards. There was commonly pooling/ponding of water within roadways and production beds. In some nurseries, regular or periodic use of water and general disinfectants products such as hydrogen peroxide were used. This seemed to be a blanket approach to control diseases rather than addressing the primary source of the infection to prevent disease infection.
- A limited number of production nurseries were seen to adopt best management practices according to NIASA guidelines or utilise irrigation and drainage management plans to improve water management.
- Very few nurseries disinfested their recirculated water. It was not considered as a sufficient risk to justify the significant costs of treatment relative to the low profit margins and historical low incidence of root rot and collar rot water related diseases of plants grown.
- Changes to the policy of water run off are likely to have nurseries develop water management plans. To manage run off, one nursery was continuously recirculated water around the nursery to limit discharge from catchment areas, whilst others were hand watering to apply water directly to pots to limit run off being generated from overhead irrigation systems.
- Weed control was very good and there is combined reliance on herbicides (such as Rout and Ronstar) available within Australia and hand weeding. Clean up in new planting areas was considered essential to start clean with a low population of viable weed seeds. The use of pre-emergence herbicides with regular hand weeding to limit establishment of weeds in pots and around the nursery to reduce the second generation of weeds has allowed for such clean nurseries. The amount of spot hand weeding practiced was evident but the lack of weeds seemed to justify it as an economic option in comparison to traditional pre and post emergent herbicides.

- There was ample access to labour reserves. A number of nurseries employed Mexicans who were seeking to work in the US. Over time this has led to second and third generation employees with staff/owner loyalty being achieved. The public health system is considered below that of Australia and employees have often provided health insurance to employees to maintain a stable work force.
- The norm on larger shrub and tree nurseries is 1 employee per acre. Larger nurseries are seen as plant production factories with similar activities required to produce plants within Australia but seemingly with less employees.
- In large nurseries, potting can be done in the paddock, typically a long distance from the central potting shed. Commonly potting mix would be transferred to the production area and this would be dropped on a plastic sheet with hand potting occurring at the site. It was typically a messy exercise but the saving in operation movement was seen as justification.
- Mechanisation was increasing and this had been driven by changes to workers compensation laws. An example of this was a previous potting machine was capable of potting 300 trays/day with new equipment capable of 300 trays/hour. The use of pot placing devices was employed in some nurseries to reduce labour.
- There is a continuous push to optimise efficiencies of production – low costs of production (COP) are a key as profit margins are being squeezed. There has been considerable resources allocated to optimising efficiency within crops (potting mix, fertiliser, pot size, planting dates, spray programs etc) to maximise the number of plants produced in a calendar year and plants per square metre of nursery space and reduce COP.
- Strong alliances with suppliers, pot producers, nutritional suppliers, marketing, crop protection and the use of specialist advisers integral in business planning/practices were implemented to optimise production of individual crops.
- Larger nurseries are investing in key acquisitions of inputs to reduce long term supply costs, i.e. purchase of a gravel pit for in-house use.
- Plant growing structures ranged from modern high wall multi-span roof ventilated greenhouses to old shadehouses with wooden slats that can be removed or replaced to adjust shade levels according to seasonal conditions.
- Many of the larger nurseries had multiple sites but they were looking to centralise them to assist in management of the business.

Stock scheduling

- The demands of the large national market for certain greenlife were evident. Detailed production scheduling has been developed and operates in line with budgets/targets and planning forecasts to achieve specific market delivery. Without such well planned and managed production schedules, business contracts and reputation would be jeopardised.
- The adoption of a team effort and all staff working toward achieving set market delivery made this viable. If a major problem developed, everyone would get involved to rectify it to minimise risk or loss of productivity felt by any offset in crop scheduling. Production jobs were prioritised regularly and there appeared to be a high benchmark and labour efficiency, i.e. it normally takes 8 people to fully load a semi-trailer in 2hrs.

Scale of nursery operations

- The production nurseries visited were generally very large. A potting machine capable of processing 20,000 gallons or 75 cubic metres in 8 hours was seen operating.
- Businesses were looking for increased efficiencies in every step of the operation to optimise and maintain slim profit margins.

Regulatory requirements

- In the US, legislation stipulates run off water can not leave the site. Some businesses are being forced to constantly recirculate water to manage water storage and discharge but will be forced to investigate long term solutions to this problem.
- Hand watering was common as it allows foliage to be kept dry, labour was abundant and the perception that water is not wasted compared to overhead systems as it targets the root zone only. Hand watering is inefficient in water delivery, however the number of pots watered relative to labour cost is seemingly cheap and it targets the potting mix not surrounding areas like overhead irrigation systems.
- The increased regulation is expected to drive the utilisation of fully recirculated and treated water systems. Irrigation and drainage management is being reviewed in some nurseries but given the low cost of bore water the economic benefits of water recycling are poor.

Adoption of best management practice and nursery accreditation

- There was little evidence of perceived Best Management Practice within the US Nursery Industry nor did there appear any linkage to the most well managed best appearance to that of the most profitable business.

- Site drainage and water disinfection were considered well below the typical standards set within the Australian Nursery Industry and with the push of increased water regulation this seems certain to change.

Plant trends

- A number of new housing/property developments within the US required landscaping of the site and/or development packages which included landscaping. This initiative is helping to grow the greenlife sector and the level of awareness and the importance of plants to the environment and the public.
- A number of traditional plant lines not considered popular here in New South Wales or Queensland were popular in the US, i.e. Berberis, Raphiolepis and Euryops.
- Screening plants, succulents, water efficient plants and potted colour were major sectors within greenlife sales. Compact gardens, privacy, water efficiency with a contrast of bright colours were the main trend in gardening.
- There was an emerging trend to supply larger plants to the market rather than smaller starter potted plant lines to offer a completed landscape environment.

Distribution and marketing

- A number of production nurseries had their own transport systems to service their clientele. Back loading transport vehicles with a variety of products were common to offset the distribution or logistics costs.
- The study tour group felt retail businesses were highly skilled and the larger operators were doing well. A small percentage of consumers appreciated the increased level of customer service and the pleasant environment of a premium garden centre relative to purchasing from chain stores or having landscapers supply plants to them.
- Small production nurseries appeared to be threatened from the growth of the massive chain stores who have massive buying power due to the plant volumes sold and pricing structures.
- The differentiation between plant display standards; gardening advice and garden design at retail garden centres relative to that of chain stores appeared similar to Australia. However, pot colour, plant labelling and retail packaging could be improved to value add and capture potential sales.
- The dominance of chain stores was obvious. The chains were continuing to increase greenlife volumes and market share by offering a range of products and “upsell” techniques. The adoption of one stop shopping convenience with a perceived reasonable price of plants to the public was achieving this.

- Retail selling prices have been conceded in an attempt to compete between retail and chains yet still be at a premium to justify lower market share but higher customer service.
- The main chain stores are: Lowes (dearer priced plants), Wal-Mart (cheaper lines) and Home Depot. All have a strong market presence which appear to be growing.
- There are strong partnerships with producers and chain stores with the majority of business working on vendor fill contracts. Complete planning schedules to consider the date of market supply, use of branded plants and presentation (labels, pots) are in place to identify chain stores.
- Large production nursery businesses are expanding to fulfil demands of chain stores – with the realisation of do it or lose it! There is considerable pressure to support partnerships as the volume of plant losses would jeopardised both parties.
- Very few businesses had a sole focus of the landscape market unlike some production nurseries in Australia.
- Plant sales are mostly via brokers who work on around 8% commission. Businesses use specialists right through marketing and negotiations to achieve suitable deals.
- Plants were generally sold for a premium based on vegetative bulk rather than pot size typical of the Australian market.

Nursery support network

The US Nursery Industry has a strong network of government and institutional support provided to it. Programs which focus on crop management and crop development with the use of genetic improvement schemes were noted to improve plant efficiency.

Results of discussion

The Australian market is more advanced in terms of pot types, pot colours, pot sizes, increased plant varieties, Plant Breeders Rights (new releases) and best management practices compared to the US. The overwhelming dominance of the chain stores who see plant supply as a category to encourage in-store spending of consumers is less important as a presentation tool compared to retail garden centres who rely on greenlife and nursery type product sales.

An increase in the presentation and variety of plants supplied by chain stores with support at the retail level via cultural information is likely to grow the total US market. The extra cost and inputs associated with this are seemingly left to specialist retail garden centres.

The increasing trend of production nurseries having to service the retail demand via chain stores is being met by a combination of larger and smaller business. The risks associated with not expanding and losing market share are far greater than not.

The adoption of new technology was not widespread in the businesses visited. The surplus of high quality, loyal and cheap labour and efficiencies of the employees has not warranted use of automation and technology.

Opportunity for common plants such as the *Murraya* in the US market and perhaps a dwarf form may be worth investigation. New plant varieties with low water requirements and perpetual flowering with a native theme are likely to be accepted in the US market.

Implications for Australian Horticulture

The US Nursery Learning Tour has resulted in a number of key contacts and friendships between the United States nursery market and representatives of the Australian Nursery Industry. The establishment of these networks should improve the opportunities for cross-informational exchange of industry knowledge, services and products to assist the growth and profitability of both markets.

An understanding of large nursery management, crop production scheduling and budgeting have been acquired by the study tour participants. It seems the trend is to increase the size of the nursery business to maintain a profitable business based on economies of scale.

There is a possibility to introduce plant liners or upstarts to suit customer demand for cheaper plants in the US market. The most popular smaller pot sizes were 3-4 inch, unlike 2 inch tubes commonly accepted by the gardening public in Australia. Perhaps a franchise arrangement may work, however there is strong demand to use mature plants to achieve instant landscapes.

The development of PBR lines to capture market niche should be explored. It was surprising *Murraya paniculata* and some of the mini hybrid *Murrayas* were not seen. Given the popularity of screening plants a specific *Murraya* hybrid could be developed and marketed in the US.

NIASA accreditation could be utilised to improve production efficiency to assist in plant profitability and reduce plant losses. NIASA is recognised nationally as best practice and providing healthy vigorous plants.

Within Australia, water regulations and water access are likely to drive water treatment to reduce disease risk, achieve sufficient security of water and comply with run off laws.

The ongoing of modifications of WaterWork courses and implemented of irrigation and drainage management plans should assist in complying with the current federal, state and local water regulations currently facing industry.

This tour was a highlight for many of the participants and the information and relationships gained of each of the participants simply can not be highlighted in a report. The clear recommendation of all tour participants was to encourage future tours either to the United States or other nursery markets to continue the acquisition of knowledge, services and products to benefit the Australian nursery industry.

How the information gathered will be disseminated

The information gained from the US Nursery Learning Tour has been summarised in a Powerpoint CD presentation by Greg Knox of Alpine Nurseries. This is available to be presented to special interest region groups or be utilised at state and national nursery conferences to demonstrate the lessons learnt.

An article could be produced for Australian Horticulture summarising the observations of differences between the US and Australian markets.

Itinerary

| | |
|-------------------------------------|--|
| Thursday 8 th May 2003 | Depart Sydney Airport (2:00pm) Arrive Los Angeles Airport 10:25am Transfer to Best Western Pavilions-Anaheim. |
| Friday 9 th May 2003 | Travel to San Diego |
| Saturday 10 th May 2003 | San Diego Tour leg Nuccio's Nursery, Hines Nursery and Altman Plants |
| Sunday 11 th May 2003 | Travel to Best Western Pavilions Anaheim |
| Monday 12 th May 2003 | Tour led by Gordon Harada – J.R. Simplot Co. Roger's Gardens, El Modeno Gardens, Sunny Slopes Trees, Nasake Bros, |
| Tuesday 13 th May 2003 | Tour led by Gordon Harada – J.R. Simplot Co. Three Star Nursery, Coiner Nursery, Normans Nursery, Monrovia Nursery – Azusa |
| Wednesday 14 th May 2003 | Travel to Holiday Inn Express-Lathrop Monrovia Nursery – Visala |
| Thursday 15 th May 2003 | Tour led by Don Mulchay – J.R. Simplot Co. Apex blending plant, Valley Crest Tree Co, Color Spot |
| Friday 16 th May | Depart for Sydney, Australia |

Recommendations

The US Nursery Learning Tour has identified a number of differences between the United States Nursery Market to that of Australia. Considerable information and/or technology has been acquired and this should be implemented to improve the level of professionalism, profitability and hence viability of the Australian Industry.

Specific recommendations are:

- Review general nursery practices to improve productivity within each crop category
- Review stock scheduling operations to improve security of product supply to markets
- Consider the minimum viable scale of nursery operations to deal with likely changes to customer base, i.e. retail to chain stores and landscaping
- Comply with all regulatory requirements
- Adopt best management practice and nursery accreditation if not already undertaken
- Consider developing plant trends for water efficiency, screening, colour and native lines
- Reassess the distribution of plant stock and marketing
- Increase the nursery support network
- The business contacts and friendships developed in the US be maintained to interact between industry to assist each other in maintaining their professionalism and sustainability with the changes ahead.

Acknowledgments

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- Horticulture Australia Limited for their support of the tour
- Nursery and Garden Industry NSW & ACT for their support of the tour
- Mr Richard Stephens, National Industry Development Officer Nursery and Garden Industry Australia for assisting with the approval of the learning tour
- Mr Ralph Groves of Baileys Fertilisers for his organisation of the tour
- Mr Greg Knox of Alpine Nurseries for producing the Powerpoint presentation
- J.R. Simplot employees Mr Gordon Harada and Don Mulcahy for acting as US guides
- All of the hosting nurseries and businesses visited in the US for their hospitality and sharing their knowledge with us

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