

## Tomorrow's Nurseries

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Although this meeting is held for the purpose of passing on plant propagation knowledge, this paper is of a different subject, and is based on my 45-year involvement in the nursery industry. The title of this paper is "Tomorrow's Nurseries", as never before have I seen so many challenges facing both production and retail nurseries.

To give you some idea as to why I made that statement one has to consider Australia's economic situation, and what our future economic situation might possibly be. This will enable nurseries of the future to steer in the right direction to ensure survival.

Multinational companies seem to be able to move their profits off shore, thus avoiding paying tax in Australia. These large companies can usually afford to use the latest technology, and in real terms, are not the bigger employers of people in this country. The tax burden therefore falls on the smaller Australian-owned industries, which most horticultural enterprises are. Couple this with the removal of tariffs and it becomes increasingly difficult for small business to survive.

The other big cost impact on our industry is that of services, e.g. power, water, drainage. The direct and ongoing cost of obtaining these services is ever increasing. Environmental laws will close in on Australian industries, the legislation is mostly in place, but as yet not well policed. I think that we all realise that we can not continue to pollute the earth that we live on, and in particular the waterways. So tomorrow's nurseries are in the making today. But in the future it will be difficult for anyone to start up a new wholesale nursery and comply with the requirements to satisfy the environmental laws. The capital investment needed would hardly present a worthwhile business proposition given the present pricing structure of our commodities.

Existing nurseries that already own their land and have access or pumping rights to good clean water will survive the next decade. But only if they look at the changes going on around them and alter not only the types of plants being produced but also their production methods to some extent. There probably is not one nursery in the world using all the technology that is available to them at this time, as some of this technology may not yet be cost effective. However, to remain in the industry changes to production techniques and methods will be essential to be able to produce plants economically.

Over the years that I have been involved with this industry I have seen a number of changes. Today we would consider it primitive to root cuttings without the aid of mist or tying grafts with raffia binding, using greenhouses with closed sash frames or loam-based soils in terracotta pots with fairly rudimentary nutritional maintenance. Were the plants any good? Yes they were, in fact I believe them to be more durable than their modern counterparts. But there is no nursery that can turn back to the old ways and survive economically today. When we look back in 15 years time at our present systems of production, we will probably say the same thing. Robotics and engineering technologies are already available and can be made applicable to

the nursery industry in so many ways, e.g. automatic transplanting machines, water and nutrient application controlled by sophisticated sensing equipment. Impossible? These technologies are already available and becoming increasingly cost effective with time.

The nurseries of tomorrow will probably have closed watering systems. At the present time production nurseries rely heavily on controlled-release fertilisers (CRF). With closed watering systems CRFs will still be used as a base, but the production manager will become more of a scientist, calculating the nutrient requirements precisely, and using both CRFs and liquid feed to achieve this. My vision of a futuristic greenhouse will not only be fitted out with the retractable screens we have today, but will have a retractable roof, supplementary lighting and far more accurate heating devices that we are currently using. Science will determine precise resting times for plants, so that winter greenhouse temperatures can be lowered with great energy savings.

What sort of plants will people want in the future? Can you see them wanting the trees and shrubs that we see growing in the older suburbs? I think not. The trends are already changing, smaller blocks of land with cottage gardens, common playgrounds for all the neighbourhood children rather than individual backyards. Can you visualise the changes that are taking place now and how we can cope with these changing needs? What about reforestation of our horrifically denuded pastoral and agricultural lands? Will our river systems be running in the next 200 years? Unless we plant trees in the near future, I think not.

So tomorrow's nurseries will be more precision production orientated. They will keep their eye on requirements for wetland planting, reforestation programs, and the changing trends for home gardeners. Tomorrow's retail garden centres will also have to keep pace. Already we are seeing these combined with allied equipment sales, cafe/restaurants, amusement centres for children, and professional advice sessions on growing and maintaining plant purchases. Garden centres are becoming much more service orientated.

Who would have imagined all the changes that have happened since back when I started in this industry. And who can really tell how technologically advanced our society will become. One thing is sure though, this industry needs to advance with technology.