How Has Plant Propagation Helped My Business?

lan S. Tolley

Tolleys Nurseries P/L, PO Box 2, RENMARK SA 5341

It helps to be born curious, and the thought of "I wonder what would happen if ...?" is the constant focus for my nursery innovations and breakthroughs.

I have been teaching horticulture under varying conditions for the past 30 years, and I have constantly encouraged my students to strive for a qualification. My earlier training in civil engineering and surveying has proven invaluable in dealing with facts and maintaining objectivity. All learning courses have a common thread, and should teach one to think with a trained mind.

It has been my observation, and certainty in my own case, that those of us who enjoy what we are doing tend to achieve more. And I am never bored! I continue to enjoy two specific facets of my life in plant propagation:

- 1) The rigour of assessing and evaluating current events related to my field of interest on the broadest possible plane in Australia and internationally.
- 2) The more difficult rigour of questioning one's beliefs in what and why and how one lives, and develops in a chosen field and lifestyle.

Our profession gives us an opportunity to create a product which enhances our environment, plus the opportunity to mix in harmonious surroundings with people of all persuasions who love plants and trees. This we need to grasp, to influence people to make the best use of shared resources and to improve the world around us.

Plant propagation now covers a vast field of endeavour, influence, and potential for growth not only on a personal level, but also for our internationally focused Society. In review I can trace a series of events which together have built a pattern enabling me to utilise my propagation experience to teach in a wide range of environments, both within Australia and internationally.

For the first few years I was isolated within my region, which forced me to innovate, without the benefits we now (45 years later) have to communicate in so many ways.

I was fortunate to become associated with the Waite Agricultural Research Institute, a division of the University of Adelaide at that time, and in particular the Departments of Plant Pathology and Plant Physiology. I was particularly encouraged when I was later appointed a Field Associate of this University, for cooperative research endeavours, and for my involvement in some 30 years of voluntary teaching of horticulture to students. There is now the new University of Adelaide Department of Horticulture, Viticulture and Oenology, Waite Campus, where I am privileged to be a current Advisory Board member.

Successful plant propagation is not only the plant — it is combined with how you transfer technology to do it well. My engineering training and mechanical skills assisted here — and for the original open-ground nursery I developed the first mechanical winch for field tree digging, adapted a planter, and invented a slow-geared platform to carry budders and nursery workers along the rows.

In the late 50s and early 60s I became increasingly concerned about the many problems associated with field-grown citrus trees. The requirement to change sites regularly, and diminishing availability of suitable land, induced me to develop a

radically new concept of complete container growing from seed to sale. I believe ours was the first commercial citrus nursery in the world to do so. I produced some of the first plastic igloos, and invented a geared overhead watering system. Trees were produced in shorter times, with reproducible non-soil media, and a guarantee of uniformity. By the late 1970s we were producing in containers 100,000 budded trees and a quarter of a million seedlings annually.

In 1960 I created and chaired South Australia's first Bud Selection Society and ran it for 15 years. Its influence can be seen in the far more necessary and sophisticated approaches of today to plant propagation improvement programmes.

In 1965 my earlier activities led to an award as one of the first 35 Churchill Fellows to study citriculture world-wide over a period of 5 months. That study provided contacts and friendships which have continued to the present day, set the course of my future development in plant propagation, and led me to be invited to become a member of the Western Region of I.P.P.S. in 1966.

By 1966 I had developed a propagation system I named micro-budding. This practise is now widely used throughout the world. It wasn't brilliant inspiration, but a response to a need to use as many buds as possible from carefully selected mother trees.

In the 1980s I invented and manufactured a systematic Tolley "Plantmaster" potting machine to provide efficient, regular out-turn of potting plants on time.

In 1981 I became involved with the development of the International Society of Citrus Nurserymen. These Congresses are now held every 4 years on different continents. We have just completed the 5th successful International Congress in France, with pre- and post-tours of Mediterranean citrus regions, and over 300 delegates attending from 40 countries.

As a learning environment these societies are unexcelled, which is why I have only missed one I.P.P.S. conference in 25 years. So many times I hear people say "this is not my field so I don't need to attend". But it is precisely the cross-fertilization of ideas that opens your own mind to approach and solve challenges in your own propagation. I know I always gain some new insight.

President Ross Hall's report in the March 1997 issue of our newsletter expresses that aspect, critical to our success as propagators, and I quote — "our conference has become one of the major methods of technology transfer with the emphasis on plant propagation. But a characteristic of our conference should always be that there is a blend of the latest technology and the 'nitty-gritty' papers by our experienced members. Getting this blend right is one of the more difficult tasks of the conference organiser."

A combination of my propagation experiences over the past 20 years has lead to increasing nursery and horticultural consulting within Australia, and overseas, and for me this process has always been a two-way learning experience.

Occasionally over the 25 years within I.P.P.S. we have wavered in focus. Members' reactions have been palpable, and we re-balanced again. How then has I.P.P.S. helped our business? The answer is that in our 25 years we have stuck to the core values of plant propagation, of its principles and practises.

I hope that combined with the other talks, this provides a segment of experience, particularly for our newer members, for the next 25 years.