

The ABC of Commercial Plant Propagation®

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THE FUTURE

We should go back to basics and look at cost benefits in propagation practices. It is important not only to work smarter but also to get more out of each hour of work performed. We have never lived in a world where so much change is happening and ever so quickly. The world of yesterday and today is not the world of tomorrow, change is upon us, can we ever keep up?

What counts in the world today? What is the global economy all about? Whatever it is, we need to be part of it, we need to join it.

As you think of the world of today, the world around us, where do you see your market? Many would answer that the youth of today have the biggest spending power, they are the ones to target.

A great revolution is nearly upon us with the “baby boomer” generation coming up to retirement age. Already in Australia’s population the over 55s make up more than 21% of the total population. If you look at the over 65s they own more than half of all deposits in our banks and financial institutions making these consumers the wealthiest in the nation. This not only applies to Australia but all countries of the developed Western World. From 2002 to 2010, the numbers of those aged 55 to 64 will rise by an astounding 45%, while the number of over 75 years will rise by 23%. By 2020 the number of those aged 65 to 75 will increase by 77%.

What does this mean to us as propagators? Why is it relevant to us today? The propagator of today and tomorrow to be successful will have to be cleverer in what they do and how they do it. We will have to get excellent results using less labour and having quicker turnaround of plants. In this situation so nearly upon us we will have to rely on more mature aged people, some possibly already working for us, to stay in positions later into life.

Major retailers are aware of this massive but slow-moving change and are gearing up to meet it. Mature people with no commitments or mortgages are estimated to increase their spending, even allowing for inflation, by double the national average. The implications are enormous. The uses of plants by the general population over the next 10 years will change, purchasing by people over 60 year of age is expected to double.

The colourful plant in attractive containers, the “impulse buy” will become more dominant in the market. The throwaway plant for use in the courtyard, on a windowsill or patio will increase in market share as people buy for today and not necessarily for tomorrow. How will changes affect us as propagators?

All of us would agree that there is significant pressure on profits today. Can I say you haven’t seen anything yet? The consumer of today has a very clear idea of the price of consumables particularly if they fall into known categories. The housewife knows to the cent the cost of milk or eggs, butter or flour. If our plant falls into a category then it is next to impossible to get the price increases we need to stay in business. How can we handle these problems?

We may be able to do one of the following: (1) We may be able to make efficiencies in the production process, propagation comes into this. (2) We may be able to package our products so they are different to the norm. (3) We may be able to introduce new products to the market. (4) We may be able to have a plant sale, sell our property, and retire.

THIS PAPER FOCUSES ON NUMBER 1

I think all of us over recent years have been looking for efficiencies to put in place in the production process. Let's face it, there are many things that can be done which increase efficiency, the propagation process is no different. If you consider what is involved in propagation the processes fall into a number of easily followed steps. I have listed these as a checklist for you to consider as you evaluate the costs in your propagation area. Each one could make a "stand alone paper" for future conferences.

- A) Cuttings vs. seed vs. tissue culture**
 - Conventional cuttings
 - Why do we use seed?
 - Tissue culture — the way of the future
- B) The harvesting of cuttings**
 - Nutrition of stock plants
 - Pretreatment with fungicides
 - Pruning — the choice of tools
 - Mass harvesting vs. individual cuttings
 - Keep cuttings turgid
 - Juvenility
- C) The storage of cuttings**
 - Removing field heat
 - Choosing the right storage treatment
 - Moisture and temperature
- D) Preparing cuttings for planting**
 - Layout of work stations
 - Cutting and bundling
 - The work process
- E) Sticking — the planting process**
 - Work bench or propagation bed
 - Flats or tubes
 - Handling bundles or individual cuttings
- F) Propagation media**
 - Costs of raw materials
 - Properties of ingredients
 - Mixing and fumigating/steaming
- G) Rooting hormones and their application**
 - Liquids vs. powders
 - Cuttings in bundles vs. individual cuttings
 - Making your own
- H) Propagation — pots vs. flats — mechanised processes**
 - The benefits of flats
 - The benefits of individual tubes
 - Mechanisation for the next stage of production

- I) The propagation environment**
 - Mist
 - Fog
 - Light levels
- J) Heating the benches**
 - Electricity
 - Natural gas
 - Diesel fired boilers
 - Do we need bottom heat?
- K) Care in the propagation house before rooting**
 - Cleanliness
 - Watching air movement
 - Fungicides
 - Watering needs
- L) Sorting and weaning**
 - Sorting of harder to root plants
 - Adjusting misting to aid weaning
 - Increasing light levels
- M) Nutrition — of plants with new young roots**
 - Liquid vs. granular
 - Slow release
 - Foliar application
- N) Watching for disease**
 - Sharp eyes — scouting of the crop
 - Regular routines
- O) Controlling fungus diseases**
 - Regular preventative spraying
 - Daily cleaning of fallen leaves
- P) Hardening off**
 - Moving cuttings to higher light to adjust for potting
 - Regulating watering
- Q) Pruning cuttings**
 - Mechanical pruning vs. hand pruning
 - Reasons for pruning
- R) The potting-on process**
 - Sale of tubes
 - From flats into tubes
 - Removing rooted plants from tubes, trays, or flats
 - Keeping in good condition
- S) What to do with returns**
 - Throw out
 - Sort and grow on
- T) Scheduling for markets**
 - The time has come — products must be ready on time
 - How do we do it?
 - What if we miss the market?
- U) Overgrown tube stock**
 - What are our options?
 - Is it valuable?

- V) Weeds — can you afford them?**
 - Weeds in propagation areas
 - Use of herbicides on young plants
 - Hand weeding
- W) Cleanliness of surrounding areas**
 - How far is far enough?
 - Scorched earth vs. mowed areas vs. concrete
- X) Different environments for propagation**
 - Glass houses
 - Shade houses
 - Full Sun
- Y) The economics of super tubes**
 - Growing on lines
 - Protected products
- Z) Profits in propagation**
 - The reason for it all

CONCLUSION

Where do we go with the checklist we have just gone through? Where does it lead us? It is clear to me that the propagator of today and of tomorrow will need to continually question the processes and all inputs needed in our trade. The pressures in keeping a business running in profit in the commercial world we live in today make it more and more important to keep looking at ways to improve what we do. It is my hope that the checklist will be used as a working document by all of you working at the propagation bench. Add and delete from it to make it more relevant to your situation and you will see improvements to your bottom line.