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NURSERY RECORD KEEPING IN PROPAGATION

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The aim in plant propagation is to achieve a 100% result. All of us, as we have developed our techniques over the years have made many mistakes and learned many lessons. Having learned from these experiences, we have developed skills

which make us the efficient operators that we are or should be.

Many of those lessons that we have learned have become basic knowledge to us, but unavailable to others if not recorded or communicated.

In my own case, having started in a very small way, and having built up a business that is supporting 13 people, it is not good enough for propagation knowledge to be directed solely from myself to my propagation staff. In the event of accident, possible hospitalization or even death, that knowledge is suddenly cut off and what was previously a flourishing business, could well get very quickly into trouble.

A few examples of where recorded information is vital, the result of lessons learned over many years, will be discussed. Plants in propagation do have many environmental responses. For one, we have found in our nursery that *draecenas* respond much better without mist, but with bottom heat

We have also learned from bitter experiences that some plants have very critical hormone tolerances. For example, the melaleucas, particularly 'Revolution Gold' and 'Golden Gem' root quicker and better with either no hormones at all or a very weak one, say strength 1 in a grade of 6. When stronger hormones are used, say in the area of 3, burn results and basal rot sets in, resulting in foliage drop and general collapse of the cutting.

Other plants that we have found to be extremely intolerant of hormones are *Leptospermum* 'Pacific Beauty,' and even the hardy and normally easy to propagate hibiscus. The Hawaiian cultivars seem to be extremely intolerant of high hormone strengths.

We had an experience years ago where there was sudden massive loss of cuttings, accompanied by a typical pattern of basal rot and gradual defoliation of cuttings. After much re-tracing of steps, checking into bottom heat temperatures, media, mist, etc. it turned out that the hormone formulation had been changed in the particular brand that we had been using and it was the hormone strength that was damaging the hibiscus. On cutting back the hormone markedly we were back in business with efficient rooting once again. There are some cultivars that will tolerate stronger hormones and root quicker and this information needs to be recorded.

We have also found that certain plants are very readily rooted at certain times of the year, but difficult otherwise, for example, *Petrea volubilis*. If the cuttings are taken during autumn (March) the success rate will be very high. If taken at

other times of the year, for example, early summer, the success rate will be extremely low.

Knowledge such as this should not remain solely with the proprietor of a nursery business. The moment he is not around to direct the cutting program, many hours may be wasted by propagating staff having to relearn such experiences as I have mentioned above, or to simply stop producing the plant.

If this sort of information can be recorded on an Index Card System all a propagator has to do is to refer to the card relating to the plant concerned to get up-to-date information on how that plant is to be handled, when to take cuttings, what type of cutting to use, which media, which hormone, which environment, etc.

Once information is recorded on a cultivar, the moment there is trouble in the propagation house, there is an immediate reference available for checking back on the possible cause of loss.

Recorded information can be extremely handy in the case of change or loss of a propagator. Even though a new replacement propagator will have his own ideas and knowledge, it is always an extremely handy safety factor in having recorded information as a starting point in his new job.

How do we go about recording information? We all may differ in this regard, but my method is to use what I call a Method & Stock Control Card. These are cards, 200mm × 130mm, which fit neatly into a storage case, all being stored in alphabetical order. The headings on the card naturally need to be determined according to what information you wish to record. Indicate whether the plant is exotic or native, shrub, creeper, or tree; whether propagation is by cutting or seed; what media to use; method of preparing the cuttings or seeding; time of year, where applicable; any peculiarities, such as type of cutting, media variation; fertilizer requirements, etc. These can all be recorded. Hormone strengths, usual time of rooting also, if necessary, addresses, phone numbers, etc. for materials to be used can be recorded.

The card can also be used for stock control on the reverse side where time of demand can be recorded, numbers sold and whether increased production is necessary. It may also be valuable to record what month cuttings should be put down to achieve a finished product at a peak time of demand.