

KEEPING ACCURATE RECORDS

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Increased productivity and an opportunity to trace troubles are some of the benefits which can accrue from keeping nursery records. They depend on accurate labelling and an up-to-date stock record.

Labels are of first importance. It is no good growing the plant unless you can sell it, and you cannot sell a plant without a label. In fact — no name — no value. Labels, therefore, deserve our consideration. Reviewing the suitability of the wider range of labelling materials available ten years ago, Dullforce, (1963) found nothing more durable than zinc and lead types, which are expensive both to purchase and prepare. As a temporary label, manila tags have served the nurseryman well for many years and, up to now, they have been the best choice for a label to attach to the tree or a batch of plants on lifting. When the plants reach their destination the labels may need to be replaced by some more permanent means of identification. Unfortunately, "waterproof" manila is no longer obtainable, and thin plastic labels seem the only alternative at the moment. Many of these are manufactured as plastic loop-through labels, but the loop creates a weak point and they break off easily. It seems that a plastic tie-on label is a better choice. For more permanent labels to mark rows or batches of plants in the nursery, wooden labels protected by two good coats of paint and written with fadeproof enamel paint cannot be beaten.

Labels should be backed up by office records. A plan of the nursery together with row by row details of the plants is essential. If any labels become lost, or obliterated, they can then be replaced accurately and confidently.

Accurate records provide a means of tracing back trouble, of searching for the origin of a deviation or fault, thus helping to eliminate it and prevent a recurrence. The propagator is becoming increasingly involved with virus infection and other factors affecting the health status of his material, and such a facility may be invaluable if all is not well with a particular selection or clone. Where it is an aim to send out plant material of the highest standard, then fully detailed propagation and sales records may be instrumental in tracing the distribution of a clone and enable it to be withdrawn, and if necessary, replaced.

The detail required in the records is probably greatest for the propagator of fruit and some ornamental glasshouse crops, because virus-free clones may not differ in appearance from infected

ones. For instance, in pome fruits it is necessary to record the source of budwood right down to the individual plant from which it was taken, and to carry this information through to the labelling of individual trees.

The same attention to detail may be required in the case of plants propagated from cuttings — black currants, for example. Even the best spray programme cannot eliminate the risk of re-infection with reversion virus through chance infestation of a stock bush or cutting with gall mites. However, if each stock bush is numbered and the cuttings made from it kept separate in the field, both parent and progeny can be grubbed at the first sign of infection in either. The same principle applies to the propagation of all plants liable to virus infection.

Upgrading your own propagating material should not be done on any hit or miss principle. It is very easy to get a false impression of the performance of a clone based on the memory of a good (or perhaps a bad) year. With the certain knowledge gained from just a few seasons' cropping figures, you will be able to avoid the non-productive clones and possible off-type mutations, and to take full advantage of any beneficial changes that may occur in the plants that are passing through your hands.

Production records may also act as pointers to unsuspected problems. In our own nursery at East Malling we found a serious decline in the production of cherry rootstock 'F12/1' which could not be associated with normal cultural factors. Scientific investigation showed the presence of *Thielaviopsis basicola*, a soil-borne fungus causing severe inhibition of root growth, and that benomyl soil drenches could provide an effective control.

Thielaviopsis is regarded as the cause of specific cherry re-plant disease, one of a group of disorders of which we are becoming increasingly aware in nursery work, and which result in poor growth where successive crops of some species are grown on the same land. Although in many cases we are unsure of the cause, we know that soil fumigation can offer a control. However, this is a difficult and costly operation. An alternative approach is to avoid trouble by careful rotation of the various nursery crops. This can only be done if adequate records are available over a period of years. These need to take the form of nursery cropping plans based on fixed measurements.

The basis of the records must be a day to day recording of the work being carried out. A pocket book is necessary. It can be used to record the details — hormone treatment, transplanting dates, etc. It has also proved very useful indeed when trying to track down the cause of the failure of a batch of plants, as well as in planning future production. Another pocket book can be used to record the budding or grafting of cultivars in the field, giving the

row number, the stock and clone, and cultivar and the source tree.

In our research nursery we find it necessary to expand the information from the field pocket books into the form of a "lifting list". This is a row by row record of the nursery showing the estimated numbers and the ultimate destination of the plants. This is invaluable where one has a large number of individual batches, sometimes quite small, where the plants are grown specially to order and often treated in some special way while still in the nursery.

From this list the number available of any cultivar or rootstock is entered in a loose-leaf ledger and by entering the orders as they come in and keeping a running total the stock position on any item is instantly available.

Office accommodation is often neglected. It is surprising to see quite large nurseries with poor office facilities. You should regard your office and the records there as a tool, to be used to increase the efficiency and the productivity of your enterprise.

REFERENCES

Dullforce, W.M., 1963, The problem of plant labelling. *World Crops*, 15(6):233.

PROPAGATION USING JIFFY 7's

P. HOWARTH

*Winster Selecta Nursery Stock
Green Lane, Winster
Windermere, Cumbria*

Most crops may be propagated in Jiffy 7's, from minute tip cuttings of ericas to large 10"-12" cuttings of conifers and shrubs, also from small seeds in the vegetable sector of horticulture to specimen tree seeds in the nursery stock industry. In other words, where seeds and cuttings are, then Jiffy 7's may be used successfully.

We at Winster have used them very successfully and extensively on conifers, maples, pernettias, skimmias, and hope to use them in rooting leaf-bud cuttings of camellias this season. Where late summer and autumn propagation takes place and root disturbance prior to overwintering is undesirable then the Jiffy 7 is most useful; e.g., last season Exbury and Japanese azaleas were rooted in late July, placed under 75 w tungsten bulbs, then potted in January. These plants produced a useful batch of saleable plants this season.