

## WHAT OF THE FUTURE

The trend at the moment is toward the compact plant for pot culture with the emphasis on a range of set defined colours. We have to recognise these trends and so have started this season to add greater uniformity to our strain, a factor we have been unable to do to date without sacrificing colour. By crossing selected cultivars of ours with acaulis, this should produce some interesting F<sub>1</sub> results for us. There remains much to do. It is no easy matter to compete with the best the world has to offer, but it's quite a challenge to try.

### PROPAGATION OF THE CORDYLINES BY VEGETATIVE MEANS

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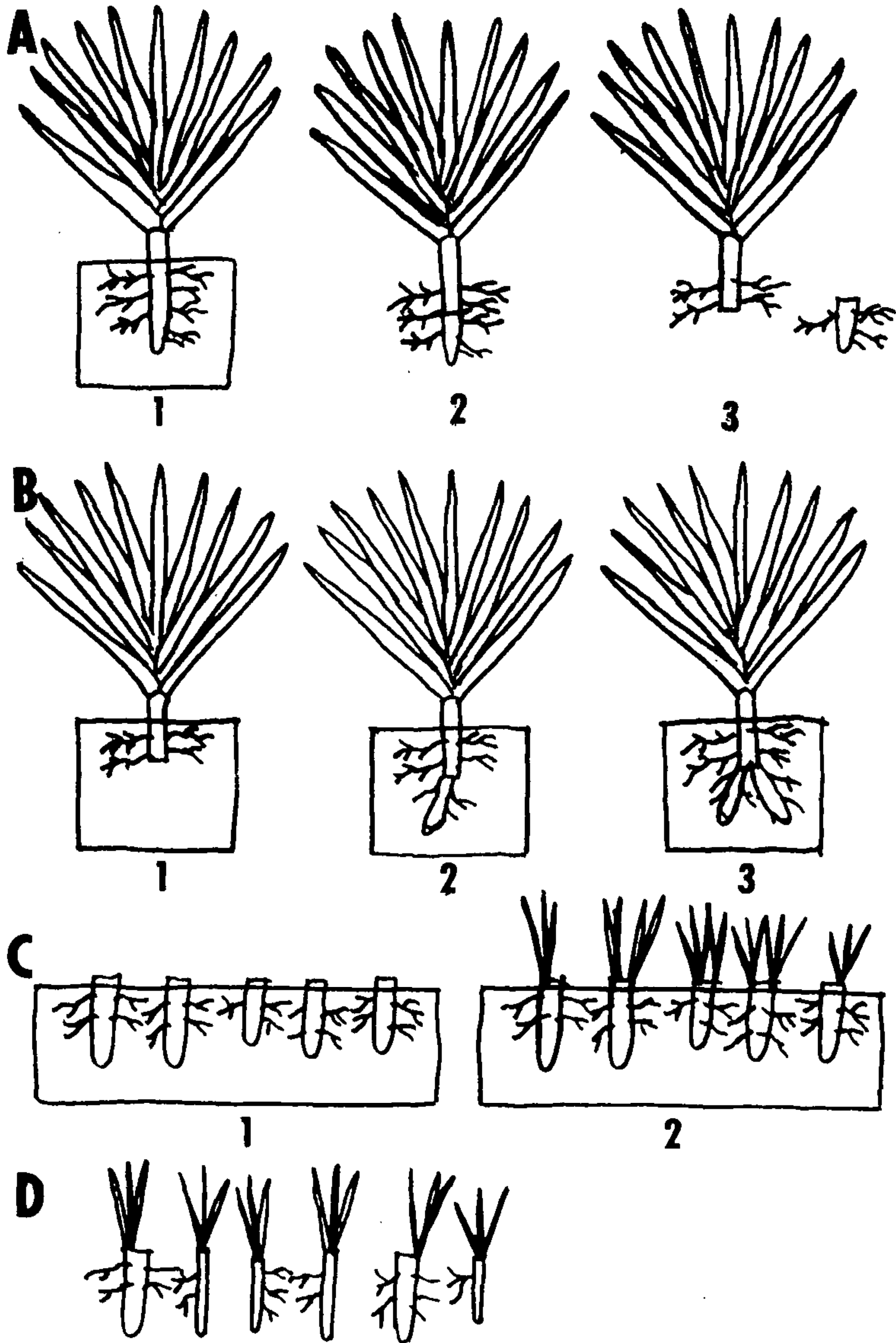
Traditionally, *Cordyline* propagation in New Zealand has been by seed germination. This technique has been most satisfactory for general *Cordyline* production, and will continue to be so for species production.

However, with the increasing number of New Zealand cordyline cultivars worthy of clonal propagation appearing — and with the added problem of hybrid pollution, causing frustration with some species, particularly *Cordyline kaspar* and *Cordyline baueri* (from Norfolk Island) — vegetative propagation is becoming increasingly more attractive.

In addition to seed, cordylines can also be propagated from large cuttings and chips of bark. Micropropagation is also used on some species. However, each of these techniques has its problems. Large cuttings have a high failure rate and are highly destructive to stock plants. Bark chips have exactly the same problem. Micropropagation has been a failure with variegated *Cordyline australis* 'Albertii,' and has not yet been successful with *Cordylines kaspar*.

However, a few years ago some Japanese visitors to this country introduced a vegetative method that is proving satisfactory in a number of nurseries. This method requires the severing of the underground stem of a mother plant — as in Figure 1. The mother plant is removed from its container and severed in the middle of the mass of roots; leaving half of the roots on the mother plant, and the other half on the severed basal stem. The mother plant is then re-planted in fresh potting mix and kept well watered for a few days to minimise stress. The mother plants will then develop a new under-

ground stem, and continue to grow normally — diagram B, Figure 1. These plants may then be sold as stock, or retained for a repeat stem severing. Cordyline is a hardy plant and, while the plants may wither and wilt for a few days, they then recover quite quickly. Some of these plants will re-grow up to three new stems, all of which can be severed again.



**Figure 1.** Steps in a vegetative propagation method for producing cordyline plants.

The severed stems are then washed in Captan fungicide and planted in a tray to develop shoots and leaves — as in C, Figure 1. These basal stems will develop shoots and continue to grow into normal plants. As an added bonus, these stems can produce a number of shoots, which are then split into separate plants — D, Figure 1. After splitting, these plants are washed in Captan fungicide and planted out in the normal manner.

This technique for growing cordylines is very satisfactory with *Cordyline australis*, *C. kaspar*, and *C. pumilio*.

The timing of the year could be an added advantage. Any losses I have had with the basal stems have been during the cooler winter season when some have decayed. I would, therefore, recommend that this procedure be carried out during a period of favourable growth — particularly early spring. Also, during this period these basal stems should not be kept waterlogged. They should be in a relatively free-draining, well-aerated mix.

To summarize, this technique for growing cordyline species and cultivars is highly satisfactory, and once sufficient plants are available, it is also very efficient — 200% to 300% increase can be achieved.

## **PRODUCTION OF CONTAINER-GROWN NEW ZEALAND NATIVE PLANTS FOR REVEGETATION**

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The concept of revegetation is a relatively recent one, having its basis in the environmental awareness which has developed over recent years. The advantages of retaining or re-establishing native revegetation around water shed areas, on very steep hillsides, or in unusable gullies are becoming increasingly appreciated. Environmental awareness has also led to the planting of natives plants on a large scale for conservation purposes and aesthetic reasons.

In response to this trend, a range of native plants was grown to test the feasibility of producing plants for revegetation. The initial response was most encouraging and now plants grown specifically for revegetation are an important part of our nursery production.