

A SUCCESSFUL TECHNIQUE FOR GRAFTING HIBISCUS

ALEX SCOTT

*Birkdale Nursery
Birkdale, Qld., Australia*

Birkdale is a small country township about 16 miles southeast of Brisbane. It is nestled in the heart of a farming area commonly called the "Salad Bowl." We have 3½ acres of production nursery and 1½ acres of landscaped display gardens, rainforest, etc. Our main lines are shrubs and trees of an exotic and indigenous nature. Within this range we specialize in azaleas, native shrubs, trees and hibiscus.

Hibiscus is a line that we grow particularly well and have built up a trade supplying something like 50,000 a year in smaller container from a 2" tube to a 4" liner. We consign to all states in Australia. There is a particularly strong demand for the Hawaiian strain of hibiscus. For those who do not know hibiscus, this particular strain has been produced by using a species in the development program which produce extremely large flowers in some very unusual shades and colours. An example would be one called 'Surf Rider' and another called 'Golden Belle' which I believe would be grown in any area where hibiscus can be grown.

When we first started to produce the Hawaiian cultivars our stock plants were young and vigorous and our production results were very high; however as the years went by the stocks became woody and the strike became less and less. I was faced with the decision of having to bed out new stock plants every few years, or to look into the possibility of grafting. I feel sure that the economics of grafting far outweigh a re-planting program; in addition, the grafted plant commands a much better price than own-root stock.

We first had to establish a technique that would produce high percentage "takes." We set down a series of trials to sort out the most suitable rootstocks (the three most satisfactory were found to be 'White La France', 'Ruth Wilcox' and 'Apple Blossom') the most suitable grafting method (whip, bud, or cleft) and the best post-grafting environment.

In our first trial we covered the grafts with plastic bags, enclosing pot and all. The grafts were packed in trays of 40 and placed in a well-shaded house. We tried two colours, clear and blue bags. The results in the blue bag far outstripped the results in the clear bag. Although the results were good, the losses were too heavy.

We next put the completed grafts under mist and over bottom heat in a rather close environment and the results were much more promising. In most cases, union of scion and stock took place in 3 weeks; they were left in the house for an extra week, then put into a

shadehouse for hardening off. Within 7 days the plants were standing quite rigid and at the end of the second week they were ready for potting-on or for sale. The grafting tape is left on at this stage to give strength to the graft, but the tapes are cut after potting.

Of the three rootstocks, I feel 'Apple Blossom' is the best because it produces big long canes with well spaced internodes and strong resistance to root diseases. The wood selected is usually pencil thickness and about 5" long; all productive eyes are cut out except the upper two which are left to produce new growth. We strike the cuttings in 9" plastic containers in pure sand, about 50 cuttings to a container. The three rootstocks selected are noted for their quick strike and I feel that the co-factors that facilitate easy striking also assist in a quicker callus and union in grafting.

When struck, the cuttings are potted into 3" dia 4" deep growing tubes and placed in the open sun for rapid root development and top growth. Once adequate root growth has taken place, they are ready for grafting. We use the cleft graft and usually graft about 4" from the top of the soil level in the pot. The scion that we use is of firm new growth with about 3 leaves. Usually the scion diameter relates to the diameter of the stock, so that cambial contact is assured. We then paint the completed graft with a solution of Benlate and derris dust. The graft is then bound with 1/2" clear budding tape and the upper part of the tie covered with grafting mastic. The grafts are then put into a propagation house covered with UV-inhibited polythene with bottom heat and mist. The grafts are held in the house for 4 weeks, after which they are hardened off in a 50% shadehouse.

The plants are ready for sale 7 weeks after grafting. An advantage of this technique is that if scion and root-stock diameters are the same, it is hard to notice that the plants are grafted once the tape is removed.