

B. HAGGO: No. Strangely, they come out a stronger plant and the reason seems to be that they are less subject to *Pythium* infection.

GRAFTING TROPICAL HIBISCUS

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Tropical hibiscus are generally from Hawaii, differing vastly from the Fijian varieties in that they tend to have larger flowers, be more frost tender, have a more 'sprawly' growing habit, and will not stand winds of any force. Hence they must be grafted and in turn this produces:

1. A stronger root system which will handle stronger winds.
2. A more vigorous plant, flowering earlier and better, with longer life.
3. A hardier scion variety in reference to frost.
4. A saleable plant in approximately 6 months.
5. A larger quantity when stocks are limited.

Grafting. Spring seems to be a successful time, and plants grafted at this time can be retailed in February (late summer). If grafted in late summer and wintered in a glasshouse they produce good saleable plants for early spring.

Method 1: Grafted onto a growing stock — in a tube — is ideal. The stock must be vigorous, hardy and produce roots very quickly. Some good examples are 'Suva Queen,' 'Simmond's Red', 'Fiji Flame', 'Agnes Gault'. If hardwood cuttings are prepared in late summer and tubed as soon as they are rooted, they produce excellent stock for grafting in the spring. A whip and tongue graft is best, producing a good neat strong union. Cleft grafting is probably practised more often for several reasons: (1) quicker; (2) possible to use machine to cut scions which is easier for unskilled labour.

The scion is prepared with two nodes and of recent growth. The leaves will need reducing in size slightly. If the scion is prepared with leaves left on it is advisable to place the graft under mist; this isn't necessary if the leaves are removed.

Method 2: The scion is grafted directly onto an unrooted, hardwood cutting. Take a cutting of a suitable stock, as described above — 3½" to 4" long, ¼"-½" thick. Cut to a node at the base, and to an internode at the top on an angle. Hibiscus being somewhat susceptible to rot, it must be ensured that a clean cut is made. The scion should be prepared the same as for

Method 1. The stock has to be split with a knife and have the scion inserted for the cleft graft. Tie very tightly with plastic, and coat with grafting wax or with a stretchy type of rubber which seals and waterproofs. If the scion is inserted flush with one side of the stock the cambiums will be matching — (the cambium of hibiscus is very wide). The best graft matches on both sides. Dip the stock in Seradix 2 with 5% Benlate and put it in a tube of 1 part peat, 2 parts sand. Put on bottom heat at 80° F, and use mist if the leaves are left on the scion. These will root in 5 to 6 weeks and the scion will start to shoot. Liquid fertilizer can be applied weekly as soon as cuttings are well rooted.

Once the scion has sufficient top growth the ties can be cut and the grafts can be potted into a larger size. If the stock shoots at any time they should be cut off.

J. WELLS: Am I correct in assuming that the method was to graft on an unrooted cutting?

A. W. PALMER: Yes, using an easily-rooted cultivar which will root in the same time the graft takes to form a union.

J. WELLS: Do you ever use a side graft?

A. W. PALMER: No, because it is not as quick as a cleft and speed is essential. The machine is only capable of making a cleft graft.

P. BATES: Do you have the stock dormant and the scion forced on to get the growth when you require it?

A. W. PALMER: No, you can have a dormant stock or scion with no leaves on either.

F. SCHUURMAN: With conditions right how many could you graft in a day?

A. W. PALMER: Two men doing the complete operation between them, including potting into tubes, did 100 per hour with ease. This output increases with experience.

G. B. SMITH: Do you try to disbud the stock to avoid suckering?

A. W. PALMER: No, it may be worthwhile — but they do not shoot normally.

E. J. MARTIN: Is the graft potted above the soil level?

A. W. PALMER: Definitely above soil level — to avoid, at all costs, problems with rot.

E. J. MARTIN: Do you find it unnecessary to wax the graft?

A. W. PALMER: The rubber obtained locally for the purpose will spread over the union completely.