

space we can't afford to only have half the units filled with plants.

When soaking the seed in water they should be placed in a fine cloth bag and only half filled to allow for movement of water through the bag and around the seed. The bag must be tied at the top and suspended in the water. A very vital point when chitting in water is that after seed have been in water for 24 hours they need oxygen, the same as they would when sown in a medium so make sure that water is oxygenated from the start of chitting.

MEDIA FOR MACHINE SOWING

Most machines being used in Australia for seed sowing are those that use pins to suck up the seed from a container and eject the seed into the trays of the medium. Problems will occur at this stage if the medium used has too many abrasive materials in it; for instance scoria or coarse sand should be avoided. Most people using these machines use peat and vermiculite, 50/50. This medium seems to cause no physical damage but one must be very careful of overwatering. With houses being filled by machine sowing care must be used in rotating the batches of different genera and species through the house.

RECORDS

There has been one problem which everyone I have consulted for has had and that is the lack of records on all aspects of propagation. There are very few people who can remember changes in weather; these conditions should be recorded because they play a great part in propagation success. Sowing dates, time of germination under your conditions, media used, treatments and pathogen control are all part of recording and become an important part of better management.

SUMMER GRAFTING OF ACER PALMATUM CULTIVARS

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Seedling *Acer palmatum* are field-grown for one year, then dug and potted into 200 mm buckets in mid-winter (July). A few are large enough by early summer (December) for budding, but most are carried over into the following year, trimmed to make standards up to one metre high for weeping

cultivars; these are approximately 10 to 15 mm in trunk diameter.

All understocks are grown in full sun in containers but are brought into the shadehouse to be budded and are left there for the remainder of the growing season.

In early summer scions for grafting are selected from vigorous new season's growth, preferably having three sets of nodes. Their length may be from 4 to 20 cm depending on the cultivar; leaves are trimmed back close to the bud. At the bottom of the scion a diagonal cut, approximately 3 cm long is made, I use a very sharp knife as it is very easy to bruise the very thin cambium layer.

A "T" cut is made on the side of the understock, the same as for a normal T-bud, the length of the cut to correspond with the length of the diagonal cut on the scion. The scion is inserted and then tied from the bottom right to the top of the scion with 12 mm wide plastic budding tape. Approximately 5 weeks later, or when callus appears under the plastic tape, the tape is undone to the top of the T-Bud cut and retied; then the stock is cut down to the level of the scion.

Approximately 10 to 12 days later new leaves should start to appear, and using 4 to 5 months high nitrogen Nutricote, growth of up to 50 cm on the stronger growing cultivars can be expected before autumn.

The scion "take" varies from cultivar to cultivar, around 85% I consider acceptable; however, losses after the stock is cut down account for another 10%.

I do not know of any other species of plant being propagated in this manner.

In the last two years there have been a lot of new *Acer palmatum* cultivars imported into Australia. I have 45 new cultivars from America and Japan and, along with the 40 odd cultivars already in Australia, now gives a very comprehensive list, although most of the new cultivars are not yet available in commercial quantities.