

2. Ahrens, J.F. 1972. Rooting of rhododendron cuttings from container-grown plants treated with trifluralin and simazine. *The Plant Propagator* 18 (3): 12-18.
3. Briggs, B.A. 1977. Manipulation of herbicides and effect of herbicides on rooting. *Proc. Int. Plant Prop. Soc.* 27: 463-467.
4. Davison, J.G. 1977. The effect of weeds on field-grown nursery stock. *A.R.C. Research Review.* 2 (3): 76-79.
5. McGuire, J.J., and Pearson, J.L. 1972. Rooting of softwood cuttings taken from container-grown plants treated with simazine and diphenamid. *Proc. Northeastern Weed Sci. Soc.* 26: 62-66.
6. Ticknor, R.L. 1966. The effect of herbicides on the rooting of juniper cuttings. *The Plant Propagator* 12 (1): 8.
7. Ticknor, R.L. 1972. The effect of several herbicides on propagation of four ornamentals. *Proc. Int. Plant Prop. Soc.* 22: 129-131.

## PROPAGATION OF CAMELLIAS

PETER HOWARTH

*Winster Select Nursery Stock,  
Windermere, Cumbria*

We have been attempting to propagate and produce about 5,000 finished camellias for garden centre sales each year. Initially we purchased stock plants from various nurseries on the Continent and in the U.K. Variability in this stock was obvious, therefore the selection of the best plants was made to form the basis of our "mother stock." This material was potted and grown on, some of which was planted outside on a hedgerow system, the remainder grown on in 10" containers in a shaded cold house. In the meantime good specimen plants were located in an area to which we have access and this season it is hoped that up to 5,000 Williamsii hybrids will be produced.

Regrettably in the 1978-1979 winter we lost many of these hybrids growing outdoors, the amazing thing being that many of the Japanese hybrids came through better than say, 'J.C. Williams' or 'Donation'.

Under Rokolene net tunnels a similar situation occurred when the newer Williamsii hybrids stood up to the severe weather whereas 'Donation', etc. died.

**Propagation.** Shoots are taken from the parent plants using secateurs and placed into polythene bags; these are then placed into a domestic refrigerator overnight or until preparation takes place. We have found that refrigerated cuttings seem to perform extremely well, and this is now a standard practice.

Due to the limited amount of cutting material available and the system we have set up, we always take leaf-bud cuttings in

October and November. It could be argued that multi-nodal stem cuttings make big plants quicker than leaf bud cuttings; we would not disagree with this, but the number of stock plants required would be large.

The leaf-bud cuttings have a single leaf and bud, the stem being about 1¼" to 1½" in length. Each cutting is wounded up to half its length. The prepared material is dipped into either a solution of captan or Benlate before dipping into Seradix No. 3. Excess powder is removed, leaving only a minute amount of Seradix on the wounded surfaces. This is very important in order to prevent decay.

A few years ago we used to stick these cuttings into Jiffy 7s, but later changed to 50 cuttings to the normal plastic seed tray. These are just pushed in with the bud almost on the surface and watered well. By this method we are getting a high percentage take. We intend to try the direct rooting cellular system in order to speed up the operation and to reduce root damage when potting on.

The compost used is 3 parts medium grade sphagnum peat with 1 part pink Shap granite chip (neutral pH) 3/16" grist. Rooting is completed in about 6 to 10 weeks according to the cultivar, using a modified Macpenny mist system with a bottom heat of 24°C (75°F) at 15 watts per square foot loading.

After weaning, the rooted cuttings are placed in a cold house and remain there for one year in the trays before potting on into 3½" pots. These, in turn, are grown on for up to one year in a cold structure, then finally potted into 6" pots.

Stopping normally takes place during these periods to stimulate side shoot growth. The compost used throughout consists of 3 parts medium grade sphagnum peat with 1 part pink Shap granite chips. Added to this is half rate Osmocote + frit, half rate ground magnesium limestone, and 4½ lbs of superphosphate, per cubic yard of mixture.

An occasional liquid feed of 26%N and 26% K<sub>2</sub>O plus chelated trace elements is given, particularly early in the year.

Our greatest asset for the propagation and growing on of camellias is our natural water supply with a pH of 3.8.

In the early years we used 0.5% Cyclocel (CCC) at 2 fl. ozs per 6" container, but later it has been discontinued since we got yellowing and crinkling of the foliage with little improvement in budding.

Over the years we have grown Williamsii hybrids, e.g. 'J.C. Williams', 'Donation', 'Mary Christian', and 'Bow Bells' along with Japonica types, e.g. 'Adolphe Audusson', 'Chandleri Elegans', 'Lady Clare', 'Rose Emery' ('Fire Ball'), 'Sauterelli' and

'Comte du Gomes'.

These cultivars have proved very successful both at the propagation stage and during subsequent growing on.

In the last two years we introduced the newer Williamsii hybrids 'Anticipation', 'Debbie', 'E.G. Waterhouse', 'Elsie Jury', 'Grand Jury', 'Inspiration', and 'Sayonara', with the cultivar 'Tomorrow' in the *C. japonica* groups. We find that these cultivars are fairly hardy and strong growing. The good solid blooms and color are advantages in the garden centre. But initiation appeared to be better and easier to achieve than in the older cultivars.

It is hoped that we shall continue working on direct rooting into various types of modules and as stock becomes more plentiful, then stem cuttings will be used in order to cut one year in our production system.

## HARDY PERENNIALS WORTH PROMOTING

CHRISTOPHER LLOYD

Great Dixter Nurseries,  
Northiam, Sussex

Plants that do not readily fit into nursery production systems tend to be dropped. The result is more and more plants of ever fewer cultivars and a general impoverishment to horticulture. Some of the plants mentioned below seem to me to appeal strongly to the public when they are given the chance to see them in a flattering environment.

*Rheum australe* (*R. emodi*) strikes me as a handsomer rhubarb than the more widely grown *R. palmatum*, because its leaves are more deeply incised and the rich purple coloring on their undersurfaces is long retained. The pure white inflorescence, borne in May, shows up well against a dark background.

The liliaceous *Veratrum album* carries a striking, branched inflorescence whose whiteness shows up more tellingly in a general garden or landscape setting than the better known, dark maroon-flowered *V. nigrum*, which is in more general circulation. *V. album* has a long effective season from July onwards. It produces an abundance of seed, but about 4 years is required to raise flowering-sized plants.

*Blechnum chilense*, sometimes known as *B. tabulare*, is a handsome, tough-leaved evergreen fern that makes excellent ground cover in an open situation. In a sunny site you get a contrast throughout the spring to autumn growing season be-