

Propagation and Culture of Hebes at Lowaters Nursery

Ian Ashton

Lowaters Nursery, Hook Lane, Warsash, Southampton SO31 9HH

INTRODUCTION

Lowaters Nursery is a wholesale nursery business located near Southampton on the south coast of England. It has approximately 2.3 ha of production space, 80% of this is modern heated glasshouse and nearly all production space has capillary beds.

More than 1 million cuttings are struck each year, of these 800,000 are used after grading. Half of this production is sold in rooted-cutting or 9-cm liner form with the remainder going through various stages to be sold as garden centre quality plants.

Since hebes make up more than 50% of annual sales, Lowaters is one of the largest hebe producers in the U.K. Our position requires us to have production methods designed to overcome the reputation of hebes for being difficult to grow, largely because of the susceptibility of some species and cultivars to downy mildew.

The production methods used by Lowaters Nursery described in this paper are by no means the only way of growing hebes, but they are the ones that work for this particular nursery.

PROPAGATION

Cutting material is best collected from the growing crop to ensure clean and fresh cuttings. The schedule below sets out the main propagation times for a range of popular *Hebe* cultivars.

- April: 'Autumn Glory', 'Blue Clouds', 'Mrs. Winder'
- May: 'Great Orme'
- July: 'Nicola's Blush', 'Amy' (syn. 'Purple Queen')
- September: 'Green Globe', *ochracea* 'James Stirling'
- October: 'Youngii' (syn. 'Carl Teschner'), 'Red Edge', *H. albicans*, *H. pinguifolia* 'Pagei'

Cuttings for all species and cultivars are made in much the same way—about 7 cm long from soft shoots with the lower leaves stripped and tips removed (except for whipcord types such as 'James Stirling'). These are dipped in Seradix No. 1 and inserted in PG104D cell trays. These 6-cm-deep cells produce better root systems than the conventional shallow tray. The compost used is peat and bark (1 : 1, v/v) with 2 kg m⁻³ Osmocote Mini (18N-16P₂O₅-11K₂O) 5 to 6 month formulation.

The nursery has a purpose built 300 m² Venlo glasshouse propagation area for hebes, with Duntech wet fog, and fan-assisted air circulation, this operates on humidity sensors control at about 85% RH. The house also has a light-controlled moveable shade-screen and underfloor heating set at 18C, ventilation is set at 28C. Under these conditions, rooting is well developed within 4 weeks, with 85% to 95% success.

WEANING

Cuttings are weaned under slight shade for approximately 4 weeks, during this time they will be pinched or mechanically trimmed at least once to encourage low breaks and improve plant structure.

LINER PRODUCTION

When ready for potting, plugs are graded for good top and root structure so that only the best material goes on to the liner stage. These are hand potted to 9-cm pots in carry trays and stood down on either sand beds (HRI Efford) or flow capillary beds (Dr. Volker Brehrens).

The liner compost mixes used for all hebes except *Hebe pinguifolia* 'Pagei' are are:

- Sphagnum peat (15 mm to 18 mm grade)
- P.G. mix fertiliser 13N-11P₂O₅-23K₂O (0.5 kg m⁻³)
- Osmocote 8 to 9 month (2.0 kg m⁻³)
- FTE 255 (0.3 kg m⁻³)
- Limestone/dolomitic limestone (3.0 kg m⁻³)
- Suscon Green (0.75 kg m⁻³)
- A.F.P. 14% to 18%
- pH 5.2 to 5.7.

For use with *H. pinguifolia* 'Pagei', 10% bark is added to the above.

Plants will spend about 6 months as liners under glass. They are kept frost free but well ventilated to 2C with air circulation fans used to keep a dry atmosphere around the plants. Liners are either hand pinched or mechanically trimmed using a specially designed machine. Trimming varies for different cultivars but the general aim is to promote a strong plant structure.

FINISHED PLANT PRODUCTION

Depending on the cultivar, final pot size and timing required for sale, some types will be put through an intermediate stage to enable plant structure to develop, minimise the time spent in final pot, and to build stocks for sales continuity.

Once ready for final potting, liners or intermediates are graded with only the best going on to the next stage in 1.5-litre, 2-litre, or 3-litre pots, depending on customer requirements. Potting is carried out using a fully mechanised potting and conveyor line with plants stood down under the same conditions described for liners.

Compost mixes used are:

Finished mix for use with all large-leaf hebes

- pH 5.5
- 95% medium sphagnum peat moss and washed grit 3 mm (95 : 5, v/v).
- Magnesian limestone (900 g m⁻³)
- PG mix fertiliser (1 kg m⁻³)
- Osmocote Plus 5 to 6 month (3 kg m⁻³)

Finished mix for use with dwarf hebes:

- pH 5.5
- Medium sphagnum peat moss : bark (9 : 1, v/v)
- Magnesian limestone (1.25 kg m⁻³)
- PG mix fertiliser (500 g m⁻³)
- Osmocote Plus 8 to 9 month (3 kg m⁻³)

PEST AND DISEASE CONTROL

Hebes present no particular problems other than downy mildew, which can wipe out entire crops if allowed to develop and in any case makes plants unsalable. The nursery routine for prevention has taken many years to achieve and involved

destroying batches of plants with the disease if it presented a danger and selecting for production only those varieties that would grow cleanly under the nursery's system. In this way clean material is ensured throughout the production cycle. One member of staff is responsible for pest and disease checking.

A minimal preventative spray regime is maintained, as too much spraying was found to aggravate the problem not cure it. The overall objective is to create growing conditions in which the disease will not develop, rather than work hard to cure a problem already developing.

SUMMARY AND CONCLUSIONS

The following key points have enabled Lowaters Nursery to produce good quality clean hebes to garden centre quality.

- Clean cutting material
- Specialised propagation facility
- Capillary sand beds or flow capillary beds
- Air circulation fans
- Glasshouse protection
- Frequent hand pinching or mechanical trimming
- Grading at every stage
- Cropping cycles adjusted for each variety
- Constant pest and disease checking
- Preventative spraying
- Destruction of problem batches
- Selection of varieties best suited to our growing conditions

All of these key points lead back to the first and most important point which is to start with clean propagation material. The rest is good nursery practice, investment in the right facilities, and attention to detail.

REFERENCES

- Scott, M.A.** 1979. Container grown nursery stock demonstration sand beds, a system for quality production. MAFF Efford EHS 78/30/a.
- Brehrens, Volker.** 1996. Go with the flow. *Hortic.* Week 219:21.