

Propagation in New Zealand for Northern Hemisphere Markets[©]

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INTRODUCTION

The New Zealand nursery industry has a long history of supplying plants to Europe, particularly to the United Kingdom. Partly this is because of the historical links to “the old country” through the Commonwealth; but New Zealand’s climatic and geological conditions mean that plants grown there do well in Europe and North America, despite the long distance from these markets. Native plants for the export trade remain a mainstay of production for many New Zealand nurseries, such as Naturally Native and NZ Liners, and will no doubt continue as long as there are European growers looking for new cultivars, forms, and species to introduce and grow.

This paper describes the author’s experiences of supplying plants to Europe and the U.K. from New Zealand.

My first contacts with the products of southern hemisphere nurseries came in the early 1980s when sales and marketing agent Jackie Morris made an annual visit to Wyevale Nurseries, Hereford, marketing plants from France (on behalf of Plandorex) and from New Zealand (on behalf of Topline). At this period, there was a relatively large range of plants on offer from Southern Hemisphere growers, from suppliers such as Duncan & Davies (New Zealand) and Malinsuns (South Africa). Plants new to the U.K. market from such sources included *Photina × fraseri* ‘Red Robin’, actinidia, and phormiums while many other plants indigenous to the Southern Hemisphere were traded in high volumes, initially, to European destinations. Subsequently, European home production of these plants increased and importation was reduced, with only the more difficult-to-grow taxa being imported, such as phormiums.

Initially, stock was exported from New Zealand bare-root with varying degrees of success, depending on the season, taxon, and the technical abilities of purchasing grower. With the development of inert composts and plug production techniques, young plug plants became the normal export product, the bare-root trade for non-woody plants had virtually disappeared by the late 1990s.

During the early 1990s, Peter Williamson, my old boss at Wyevale Nurseries, would often return from visits to New Zealand, full of enthusiasm for production techniques new to us, such as hardwood cutting production of wisterias and hibiscus; and budding of *Acer*, *Cornus*, *Hamamelis*, and *Magnolia* taxa in the open ground. Of course we tried to copy all these techniques to the best of our ability at Hereford, but with little success, putting the failure down to climatic differences, and the unforgiving Hereford clay soils.

When Wyevale Nurseries acquired the nursery business of Desmartis SA in the south west of France, Peter’s enthusiasm for copying some of the New Zealand production systems was rekindled, as he felt convinced that the warmer climate and the rich fertile soils of the Dordogne region would allow him to achieve his dream of European “New Zealand” style field produced *Acer* and *Magnolia* crops. Unfortunately the success rate was unremarkable, and certainly not commercial, and the project was abandoned after several years of disappointing results.

GROWING IN NEW ZEALAND FOR EXPORT

During the 1990s I had become involved in nursery stock sales and marketing and in 1994 took over Jackie Morris’s portfolio including stock from NZ Liners and a new business called Stepping Stones Nursery which at the time was working to generate a market in *Acer*, *Cornus*, and *Hamamelis* species.

Stepping Stones Nursery is located in the south west corner of North Island, near New Plymouth, where the spectacular volcanic Mount Taranaki dominates the scenery. The nursery is sub-divided into blocks for the *Acer* species, with high hedges to prevent wind

and salt damage to the crop. The soils are deep, well-drained, and volcanic and the mild damp climate lends itself to outdoor *Acer* production. More than a million understocks are produced each year in the 40-ha production area, the stems being cut to the desired size with up to 2 m length rods being produced for the full standard crop.

The production cycle starts during late July to early August with the cutting and preparation of the hardwood understocks, which are then callused in bottom-heated boxes. The callused cuttings are pushed through plastic into a fine tilth and allowed to develop. Irrigation is not usually needed as the climate provides a regular natural watering.

Once the under-stocks are established the propagation process can begin. In the past, budding was the main propagation system, resulting in a single shoot, tree-like plant. Over the years, budding has largely been replaced by grafting to produce a bushier, multi-stem plant, with branching from the base.

Of the 1 million understocks planted, some 850,000 are successfully budded or grafted.

Budding and grafting starts in mid-October, for the larger plants, finishing in December with the “piccolos,” the smallest grade produced so far.

The “shut-down” process begins in late May to early June when copper sprays are used to promote leaf abscission, and undercutting in some cases to prepare the plants for lifting.

Dispatch is generally from late June to late July. This short 6-week window for plant exportation from the southern to the northern hemisphere cannot be missed. Invariably, there is a mild New Zealand autumn, but we cannot wait for a natural autumn ripening.

Prior to lifting all plants are sticky labelled to avoid mixing in the lifting, cleaning, and dispatch processes. Plants are bulk-lifted and heeled into holding areas. The plants are then taken for processing and put through the cleaning and dispatch preparation process. Once on the processing chain, the plants are root-dipped in a water-retaining gel and packed carefully to achieve maximum box loading. The plants are packed with damp shredded paper to ensure they arrive at their destination in a damp humid condition. The boxes are shipped to Auckland airport where they are cold-stored at 5-6°C for several days before being palleted and flown to Europe.

All Stepping Stones plants are cleared to U.S.D.A. standards, so are free of soil, and well within E.U. standards. All plants can be traced back to individually identifiable fields and undergo regular growing seasonal inspections, as well as receiving a further health inspection prior to export.

Airfreight is calculated by volume until a certain weight and then the charge is by the kilo, so nurseries aim to use the volume to the maximum. Transport costs are between 10-12% of the overall price charged to the customer despite the long distance involved.

The aim is to have the plants on the client’s nursery in less than 5 days following departure of the shipment, but it is often quicker than this.

Once the plants arrive at their destination, they need to be potted immediately because dormancy will already have been broken, with a gradual temperature increase during the journey. Bud-breaking is expected some 2 to 3 weeks after arrival in Europe, with the plants getting on average a half season of growth over 10 weeks.