

Specification for supply and quality control.

Introduction and synopsis:

Metropolitan Tree Growers Pty Ltd is a professional horticultural company, dedicated to the highest standards of horticulture and giving you the best trees, service and value. We presently grow high-quality trees for councils and public authorities throughout south - eastern Australia. Our trees are grown using the best horticultural methods, which include root-conscious pruning, structural branch pruning techniques and correct root: shoot ratios. We specialise in the production of suitable species and selections for streetscape and other public open space. Presently we are providing the Melbourne municipal market with the best selections for its varying environs. MTG grows both Australian native and exotic trees in 16 Litre (1.2-1.5m height), 40 Litre (1.8-2.5 m height) and 75-95 Litre (3.0-4.0m height) SpinOut®-treated, squat containers. The SpinOut®, an inert copper containing paint, is one aspect of our root conscious production incorporated with physical root pruning at all potting stages. As we are specialist growers for urban plantings, Metropolitan Tree Growers have the best cultivars, provenance selections and varieties for streetscape planting.

One of the key aspects of MTG is the skills and technical knowledge of its staff. This includes: an accurate understanding of street-tree varieties and their attributes, knowledge of the needs of urban horticulture and urban forestry, specific knowledge of the international production techniques for municipal trees.

Goal: To produce trees purposely selected for the needs of the urban streetscape with root-conscious production, have appropriate high-quality canopy development, and be vigorously growing.

A. Transplant seedling / bare root stage:

The seed we source for propagation comes from reputable seed merchants and organizations such as the CSIRO Seed Centre and Greening Australia. We also custom collect specific seed from locations such as the Mount Gambier Prison Seed Orchard, South Australia for *Eucalyptus leucoxylon* subsp. *megalocarpa* Elite. Part of our production relies on guaranteeing trees without the root deformities that can be caused by incorrect nursery practice. For this reason, we direct-sow all of the seedling-produced trees into Olive Pots treated with SpinOut®. We insure that the extra seedlings that germinate in the tubes are clipped-off rather than pulled out. This will ensure that the root system of the remaining seedling is not damaged or deformed, by pulling out any other seedlings. We transplant from the Olive Pot when the root-mass is extensive enough to remain intact once removed from the Olive Pot and before there is any significant discernable roots. For cutting-grown plants, we strike into trays or plugs and then transplant carefully into Olive Pots. Most of the seedlings will be then transplanted into a 16 or 40 litre container and are generally 20-35cm tall.



We purchase quality bare root trees from reputable growers such as JFT, Flemings and PBM Nurseries. Stock is assessed for root defects on potting and remedial canopy pruning to remove major bifurcations and to develop a central dominant leader.

B. General root-ball characteristics of our stock:

1. All stock will be produced in copper or air-pruned containers at all containerised stages,
2. The initial level of planting (top of tube = top of container) will be maintained at all transplanting stages,
3. At each transplanting stage, roots will be examined, and all circling roots or deformed roots will be removed/ severed. Typically, at each stage, vertical cuts will be made throughout the root-ball to ensure that no hidden circling roots remain.
4. The appropriate air-filled-porosity of potting media will be between 18-24% and to Australian Standard ISO-9002. We incorporate a long term fertilizer such as Green Jacket and or Nutricote to our media to provide gradual long term release of fertilizer to the trees over the growing period of 9-12 months.
5. We use three specific watering regimes within the nursery: automated overhead irrigation for 16 Litre stock; Octa – Jet micro-jet emitters for 40 Litre volume and above stock; and hand watering of all stock in the nursery to field capacity 10-15 times throughout the growing season and as required.

C. General canopy characteristics of our stock:

1. All "botanical" forms of trees (not mop-tops, topiary), will be produced as single-leadered trees unless otherwise noted. This involves the removal of all bifurcations throughout the production cycle.
2. Ligno-tuber shoots and all other basal shoots will be removed appropriately using current arboricultural standards.

3. Trees will only be staked in the nursery for providing trunk straightness and then removed early before there is a reliance on the stake.

i. 16 Litre stock: 1400-1600mm height, 10-15mm caliper at ground level.

Structurally pruning to form a strong central leader, no strong lateral structural branches are formed at this stage as they will be removed for canopy-clearance later as the plant develops to form a street tree. Generally we remove the lowest branches 50mm above the surface of the container and then hedge the rest to a height of 800mm. These lower branches are left to aid in caliper development and stem taper. Pruning of native stock will be scheduled four times within the production of the 16 litre tree. Bamboo stakes are used initially in some instances for trunk straightening and then removed before there is reliance on the stake, and potential detriment to root development. All bifurcations and crossing branches are removed.



ii. 40 litre stock: 1800-2400mm height, 20-30mm caliper at ground level.

Canopy development of this stock is significantly important, and includes structural branches at approximately 1400mm height from ground for trees sold with botanical form. All bifurcations and crossing branches are removed. A radial canopy is encouraged by pruning of these plants, with the side branches below the start of the structural branches sheared back, and left to increase trunk calliper. Trunk taper in this size will be developed through un-staking of these trees once a central straight leader is initiated. Ideally, these trees will be loosely staked at-most in the nursery.



D. General growth states for all stock:

1. We intend to harden-off all stock at our Alphington nursery for 4 weeks before delivery to our clients. This is successfully achieved by water reduction for 1-2 weeks for stock grown at Alphington, Docklands, while stock of MTG's contract grown in Coffs Harbour will be acclimated 4-6 weeks prior to delivery to our clients. This process reduces risk of plant damage in shipping and improves readiness for the streetscape environs. All stock will be thoroughly irrigated to field capacity no more than 24 hours prior to shipment.
2. All stock we produce is provided free of pest and disease damage, including freedom from root-rot diseases (caused by de-oxygenation of the potting mix), and freedom from obvious foliar damage. Occasionally we will have some infestation of Lerps and Eriophid mite. This is very difficult to control on native plants compared to Mealy Bug and caterpillar infestations (which can be more easily controlled) and we recommend that it is not as detrimental to the trees success in the streetscape but more a visual nuisance.

E. Quality control

Our internal procedure for quality control is managed through close supervision of staff and written records for each individual production task; pruning, potting, picking-out and shipping. For example, we have a checklist that stock has been picked, prepared to metro standards, this is then signed by the individual Nursery person, checked by the manager in charge and filed with the delivery docket for that particular order. In this way we have records to check when there has been a problem with a particular batch or process.

All stock will be true-to name. If we are supplying specific cultivars, these cultivar differences will be maintained by correct taxonomic labelling. We label each individual native transplant when sown with the seed batch number, botanical name and provenance. This tag is then transferred to the next potting stage and on delivery to our clients.

F. Right of rejection.

On spot visual inspections by our clients can be arranged within 2-3 hours notice for either our Docklands or Alphington Nurseries. If any of the trees are deemed to be unsatisfactory in any way and they have been shipped prior inspection, these trees will be collected free of charge to our client.

G. Product pricing

Please find our current list prices for 2006-2007:

16 Litre SpinOut Squat	@\$45.00 Inc GST
40 Litre SpinOut Squat	@\$115.00 Inc GST
40 Litre SpinOut Squat Metropolitan Elite	@\$145.00 Inc GST
50 Litre SpinOut Pot	@\$125.00 Inc GST
75 Litre SpinOut Squat	@\$195.00 Inc GST
95 Litre SpinOut Pot	@\$220.00 Inc GST

Trading as Metropolitan Tree Growers Pty Ltd
2 Wingrove St, PO Box 5134 ALPHINGTON VIC 3078

Tel: 03 9499 9913 Fax: 03 9499 9916 Mob 0411 710 946 Email: john@metrotrees.com.au Web: www.metrotrees.com.au

We do require a 20% deposit for contract growing.

H. Weekly holdings costs.

Only applies beyond the specified delivery for the months Oct – March, due to the requirement of extra irrigation management, Nursery space rental and remedial pruning.

@\$2.80 Inc GST per tree per week.

I. Potting-on Costs:

For that stock not delivered by the specified planting date or requested to be moved up in size for a particular project:

16 to 40 Litre @ \$15.00 Inc GST

40 to 50 Litre @ \$25.00 Inc GST

40/50 to 95 Litre @ \$65.00 Inc GST

J. Typical growing system and photographs.

As per attached images.

K. Sourcing of that stock of which we do not grow.

We are happy to source stock for our clients, although it is often difficult to ensure quality in every circumstance due to the wide industry variety of growing methods and management. We can offer to provide the service of sourcing on the understanding that we will do our utmost to provide comparable tree quality to our own and to the specifications requested by our clients. The area of sourcing is a very difficult process to get right every time.

L. To summarize:

- I. use of known-provenance propagation material of required varieties,
- II. contract production with PGA of high-quality transplants which meet MTG production criteria, and purchasing from reputable bare-root tree producers,
- III. exclusive use of root-conscious containers producing ideal root growth,
- IV. use of growing media ideally suited for tree growth and from suppliers certified by ISO-9002,
- V. scheduled pruning of nursery trees as required to produce a well-balanced canopy,
- VI. delivery of trees in ideal condition at the best size for survival and rapid growth.
- VII. growing of appropriately large numbers of streetscape lines to provide even groups.

Please also refer to our current Tree Handbook 2006 – 2007 for detailed descriptions of our trees and other associated information.

Should you have any further questions or would like further elaboration on any particular nursery process, please do not hesitate to ask.

Sincerely yours,

John Fitzgibbon
Managing Director