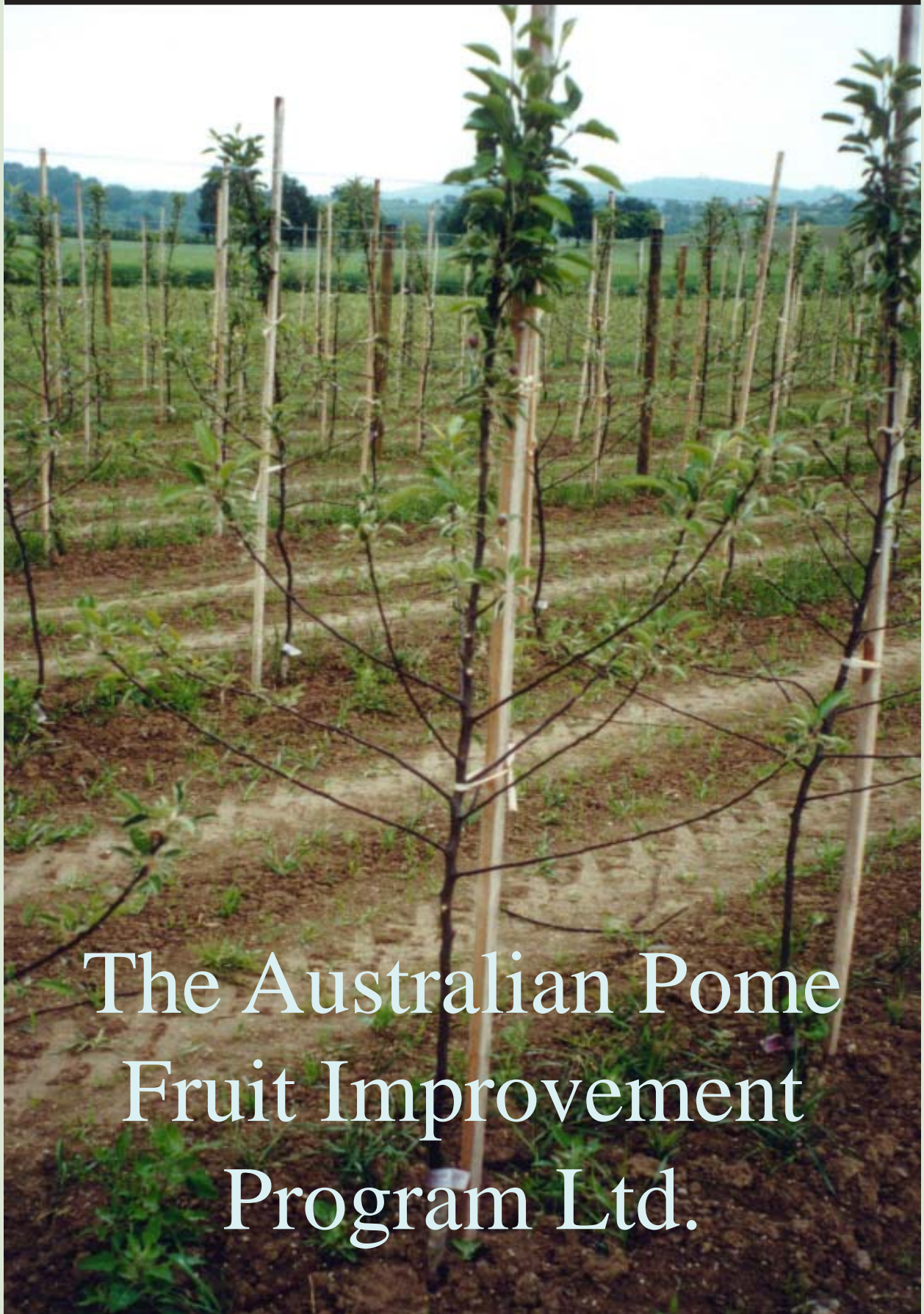


Nursery Tree Specifications & Tree Types Description



Nursery Tree Specifications & Tree Types Description

This tree specification and tree types description is provided to assist those involved in the Australian pome fruit industry to establish a reference standard for nursery trees. *(The rootstock/scion combination is also essential in this process and needs to be arranged directly between the grower and the nursery tree supplier)*

General Requirements

Suppliers growing and providing apple trees for Australian Orchards shall ensure that each tree that is delivered is:

- Produced from bud and graft wood from trees that are virus-tested negative for the following viruses, apple stem-pitting virus, apple stem-grooving virus, apple mosaic virus & apple chlorotic leaf spot virus. Rootstocks used in the production of the nursery trees should also test negative for the viruses described above.
- Produced from trees that are true to type, that is it meets the pomological specification of the variety.
- Budded/grafted onto the rootstock at a minimum of 100mm above the ground and not more than 200mm from the ground.
- A minimum calliper size (trunk diameter) of 14mm measured 100mm above the graft/bud union.
- A minimum height of 1.6 metres measured from the bud/graft union.
- Left with a root system following lifting that can adequately support the tree, where possible the main roots are to be a minimum of 250mm in length. The tree is to be free of residual soil.
- Has minimal damage from mechanical harvest or other operations.
- Free from obvious lesions, pests (woolly apple aphid) diseases (apple scab and powdery mildew). Treatment for pests and diseases can only be with chemicals registered for that purpose.
- Not treated with any chemicals to accelerate defoliation of leaves other than low biuret urea and copper formulations, hand striping of leaves can occur but only on the growing tips.
- Grown and supplied in accordance with the phytosanitary requirements of the state where the trees are grown.
- Dipped in or sprayed with a solution of winter oil and copper immediately prior to shipping. Winter oil and copper formulations at their label rate.
- Bundled and transported to ensure that absolute minimal damage can occur and that tree roots remain damp.

These general requirements are to be used in conjunction with the following tree descriptions.

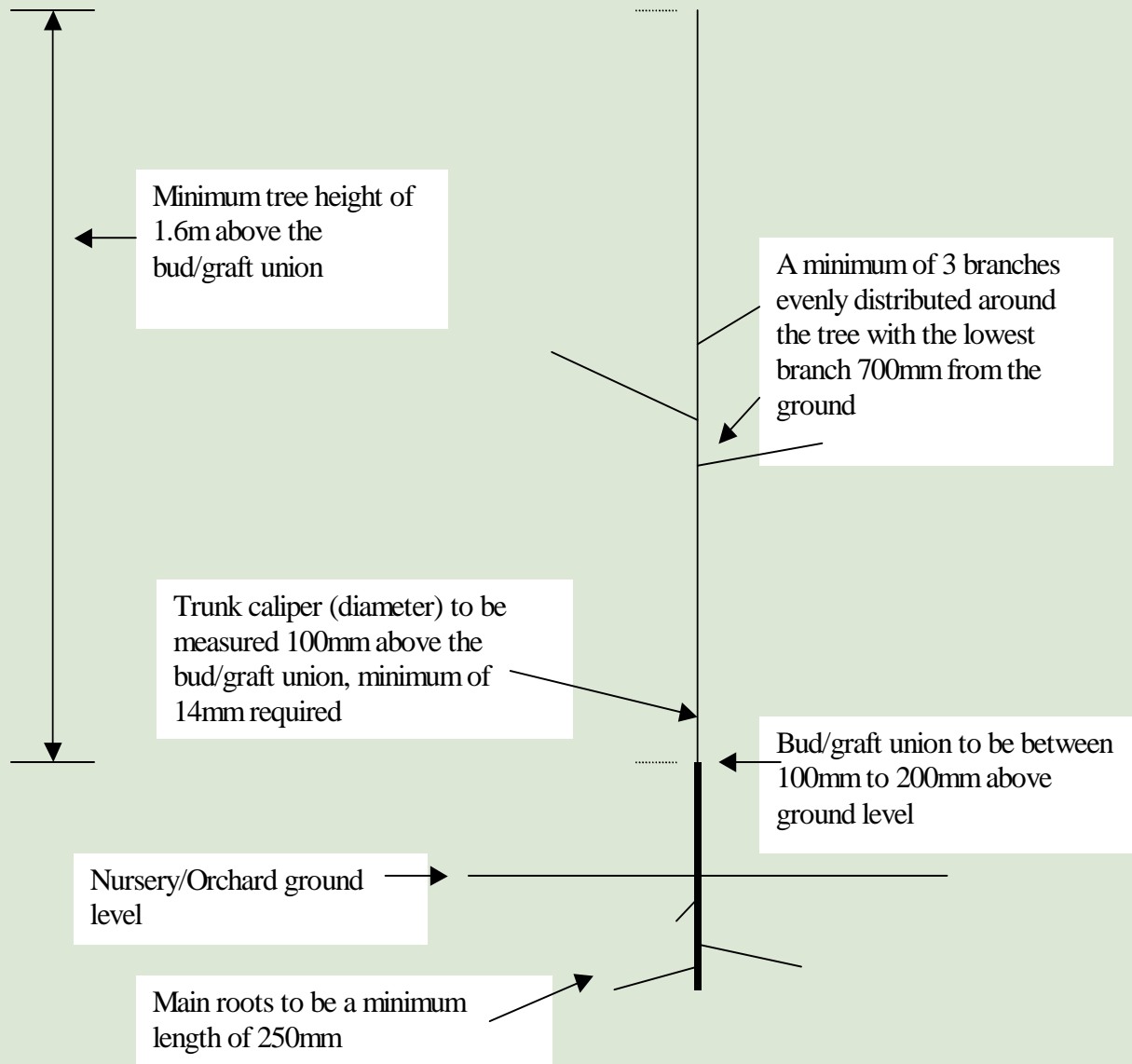
Summer Budded Trees Production and Description

This is a 2-season process. Rootstocks are planted in spring (September) and budded in summer (February). The stocks are left in the ground for winter and are headed off at the bud in the late winter (August). The bud is then grown into a tree in the second season.

Minimum tree specifications for summer budded trees in addition to the general requirements.

- 3 branches distributed evenly around the tree
- The lowest branch is to be a minimum of 700mm from the ground; this will vary according to the growing characteristics of the variety.
- Branches are to meet the 3 to 1 rule. That is branches have a diameter no more than 30% of the trunk diameter.

Tree Diagram (not to scale)



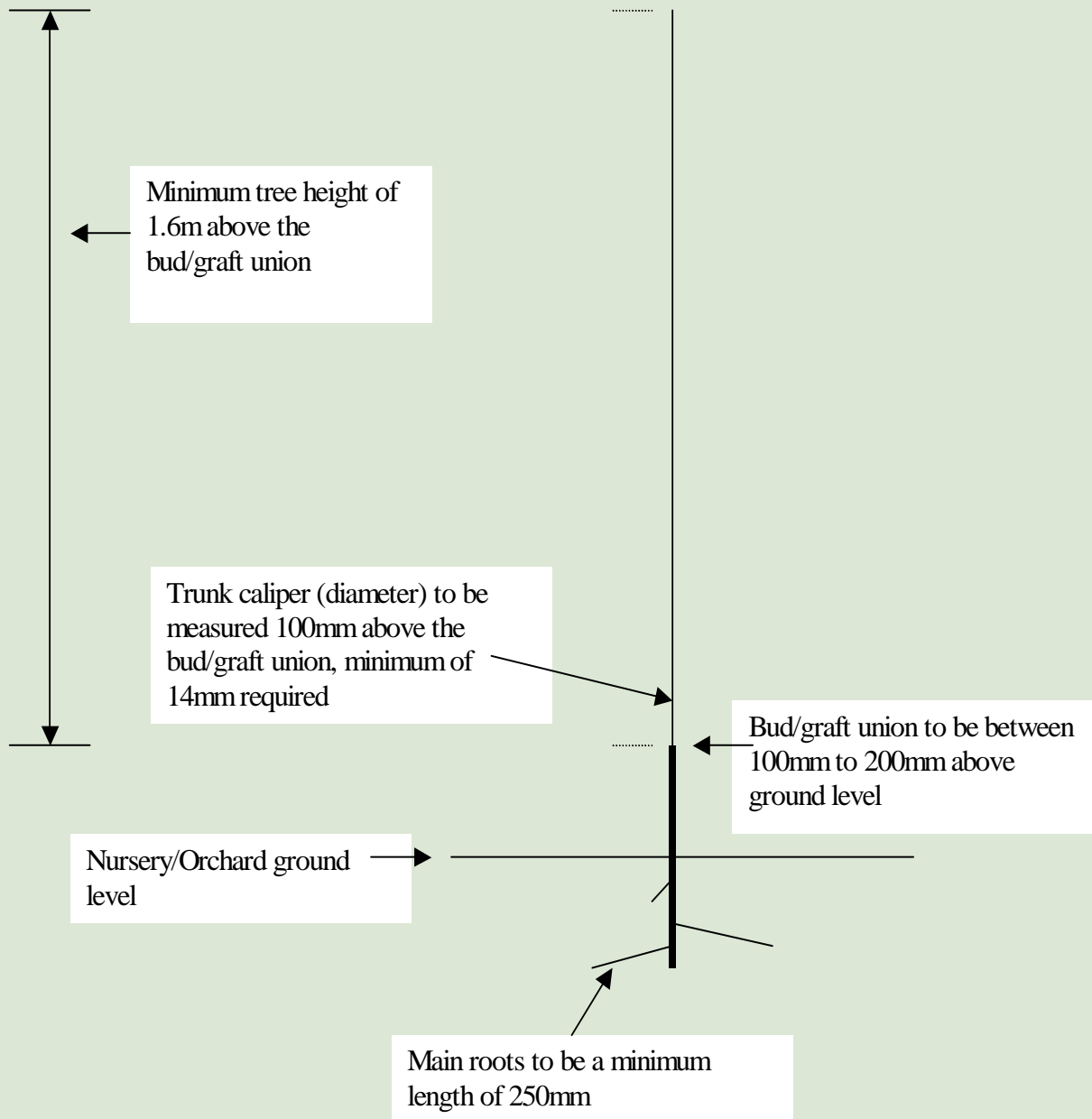
1-year-old Whips or Rods Production and Description

This is a 1-season process. Rootstocks are bench grafted in the winter and planted in the spring. The top or best shoot is encouraged and a tree with a single trunk is grown during the growing season. Trees are lifted in the next winter for delivery.

Minimum tree specification for 1-year-old whips or rods in addition to the general requirements

- **Trees to be straight**

Tree Diagram (not to scale)



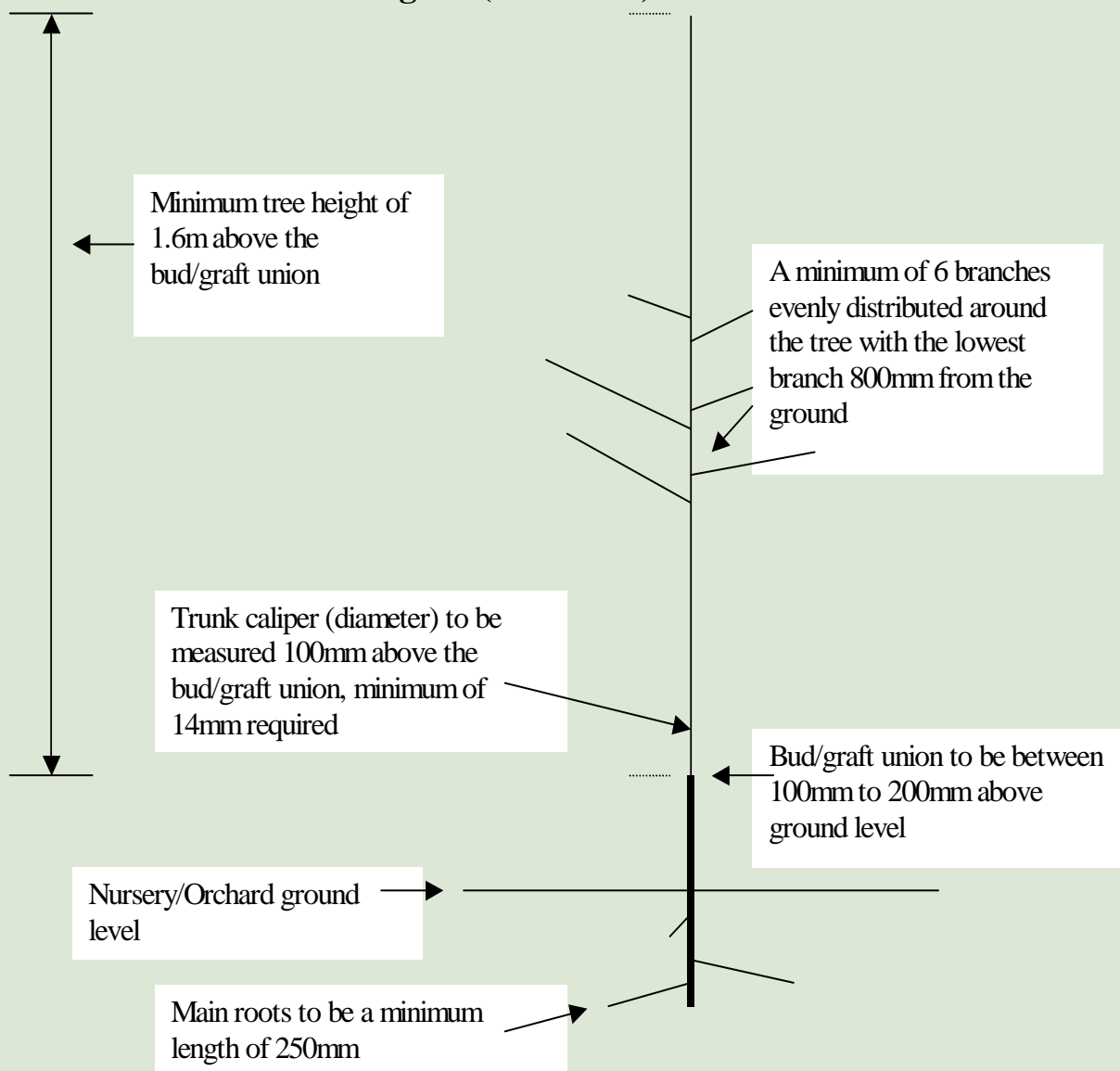
2-year-old Knip Tree (European style trees) Production and Description

This is a 2-season process. Rootstocks are bench grafted in winter and planted in spring. The best shoot is promoted to form a single stem during the growing season. The tree is left in the nursery and headed at the required height (approx 750mm above the ground depending on the variety) at the end of the second winter. The top bud is promoted and the tree branches are grown on the new growth. A number of techniques are practiced to encourage branching on the new growth. Trees need to be supported in the nursery for this process to be successful.

Minimum tree specifications for knip boom trees in addition to the general requirements.

- 6 branches distributed evenly around the tree
- The lowest branch is to be a minimum of 800mm from the ground; this will vary according to the growing characteristics of the variety.
- Branches are to meet the 3 to 1 rule. That is branches have a diameter no more than 30% of the trunk diameter.

Tree Diagram (not to scale)



Example photographs of nursery tree production as described in previous pages.



Above: Budded nursery trees in December.



Left : Budded nursery trees showing excellent branch development in June (Prior to lifting).

Example photographs of nursery tree production as described in previous pages.



Above: Knip Boom Gala trees in January (2nd growing season)



Left: Close view of Knip Boom Gala trees in January showing branch development (2nd growing season)



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