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GENEVA

**TECHNICAL WORKING PARTY  
FOR  
ORNAMENTAL PLANTS AND FOREST TREES**

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WORKING PAPER ON TEST GUIDELINES FOR TEA TREE  
(*Leptospermum* J.R. Forst. and G. Forst.)

*Document prepared by experts from Australia*

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I. Subject of these Guidelines

1. These Test Guidelines apply to all vegetatively propagated varieties of *Leptospermum* J.R. Forst. and G. Forst. of the family Myrtaceae.

II. Material Required

1. The competent authorities decide when, where and in what quantity and quality the plant material required for testing the variety is to be delivered. Applicants submitting material from a State other than that in which the testing takes place must make sure that all customs formalities are complied with. As a minimum, the following quantity of plant material is recommended:

10 rooted cuttings.

2. The plant material supplied should be visibly healthy, not lacking in vigor or affected by any important pests or diseases.
3. The plant material must not have undergone any treatment unless the competent authorities allow or request such treatment. If it has been treated, full details of the treatment must be given.

III. Conduct of Tests

1. A test should normally be conducted for one growing period. If distinctness and/or uniformity cannot be sufficiently established in one growing period, the test should be extended for a second growing period.
2. The tests should normally be conducted at one place. If any important characteristics of the variety cannot be seen at that place, the variety may be tested at an additional place.
3. The tests should be carried out under conditions ensuring normal growth. The size of the plots should be such that plants or parts of plants may be removed for measurement and counting without prejudice to the observations, which must be made up to the end of the growing period after establishment. Each test should include a total of 10 plants. Separate plots for observation and for measuring can only be used if they have been subject to similar environmental conditions.
4. Additional tests for special purposes may be established.

IV. Methods and Observations

1. All observations determined by measurement or counting should be made on 10 plants or parts of plants taken from 10 plants at least 2 years old.
2. For the assessment of uniformity a population standard of 1% and an acceptance probability of at least 95% should be applied. In the case of a sample size of 10 plants, the maximum number of off-types allowed would be 1.

3. All observations on the young leaf should be made on the distal part of the shoot on young leaves as soon as they have reached full size. All observations on the mature leaf should be made on leaves of the middle part of the shoots. The color should be observed on the upper side.
4. 'At first opening' is defined as the same day that the petals reflex from the curled position in the bud.
5. Because daylight varies, color determinations made against a color chart should be made either in a suitable cabinet providing artificial daylight or in the middle of the day in a room without direct sunlight. The spectral distribution of the illuminant for artificial daylight should conform with the CIE Standard of Preferred Daylight D 6500 and should fall within the tolerance set out in the British Standard 950, Part I. These determinations should be made with the plant part placed against a white background.

## V. Grouping of Varieties

1. The collection of varieties to be grown should be divided into groups to facilitate the assessment of distinctness. Characteristics which are suitable for grouping purposes are those which are known from experience not to vary, or to vary only slightly, within a variety. Their various states of expression should be fairly evenly distributed throughout the collection.
2. It is recommended that the competent authorities use the following characteristics for grouping varieties:
  - (a) Plant: growth habit (characteristic 1)
  - (b) Leaf: main color of upper side (excluding pubescence) (characteristic 17)
  - (c) Flower: type (characteristic 27)
  - (d) Petal: main color at first opening (characteristic 38) with the following groups:
    - Gr. 1: green yellow
    - Gr. 2: white
    - Gr. 3: red pink
    - Gr. 4: red purple
    - Gr. 5: red
    - Gr. 6: other color (indicate color)

## VI. Characteristics and Symbols

1. To assess distinctness, uniformity and stability, the characteristics and their states as given in the Table of Characteristics should be used.
2. Notes (numbers), for the purposes of electronic data processing, are given opposite the states of expression for each characteristic.

### 3. Legend

- (\*) Characteristics that should be used on all varieties in every growing period over which examinations are made and always be included in the variety descriptions, except when the state of expression of a preceding characteristic or regional environmental conditions render this impossible.
- (+) See Explanations on the Table of Characteristics in Chapter VIII.

VII. Table of Characteristics/Tableau des caractères/Merkmalstabelle/Tabla de caracteres

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
<b>1. Plant: growth habit</b>					
(+)					
upright				Ruby Glow	1
bushy				Nanum	2
spreading				Pacific Beauty	3
prostrate				Backwater Beauty	4
<b>2. Plant: height</b>					
very short (<50 cm)				Julie Ann	1
short (about 75 cm)				Pink Cascade	3
medium (about 150 cm)				Fairy Rose	5
tall (about 300 cm)				Copper Sheen	7
very tall (about 500 cm)				<i>Leptospermum laevigatum</i>	9
<b>3. Plant: attitude of branches</b>					
(+)					
erect					1
arching				Pink Cascade	2
horizontal					3
weeping				BY18, Cardwell	4
<b>4. Plant: diameter</b>					
narrow (<1 m)					3
medium (about 1,5 m)				Julie Ann	5
broad (about 2,5 m)				Album Flore-pleno	7
<b>5. Plant: density</b>					
open				Ruby Glow	3
medium					5
dense				Roseum Flore-pleno	7

English	français	deutsch	español	Example Varieties Exemples Beispielsorten Variedades ejemplo	Note/ Nota
<b>6. Young stem: color</b>					
yellow green					1
light green					2
medium green					3
reddish green					4
red					5
purple					6
<b>7. Young stem: hairiness</b>					
absent					1
present					9
<b>8. Branch: texture of bark</b>					
smooth					1
papery					2
fibrous					3
<b>9. Leaf: attitude to (+) stem</b>					
adpressed					1
oblique					2
perpendicular					3
<b>10. Leaf: length (* )</b>					
very short (<5 mm)					1
short (about 10 mm)				Rhiannon	3
medium (about 20 mm)				Aphrodite	5
long (about 30 mm)					7
very long (>35)					9

English	français	deutsch	español	Example Varieties Exemples Beispielsorten Variedades ejemplo	Note/ Nota
<b>11. Leaf: width</b>					
<b>(*)</b>					
narrow (<5 mm)				BY11	3
medium (about 7 mm)				Rhiannon	5
broad (>10 mm)					7
<b>12. Leaf: shape</b>					
linear					1
oblong					2
elliptic					3
orbicular					4
ovate					5
obovate					6
<b>13. Leaf: profile in cross section</b>					
<b>(+)</b>					
infolded					1
incurved					2
flat					3
recurved					4
<b>14. Leaf: shape of apex</b>					
acute				Aphrodite, Rhiannon	1
obtuse				Rudolph	2
rounded					3

English	français	deutsch	español	Example Varieties Exemples Beispielsorten Variedades ejemplo	Note/ Nota
<b>15. Young leaf: general color</b> (* )					
yellow				Pacific Beauty	1
yellow green				Aphrodite	2
light green					3
medium green					4
dark green					5
blue green					6
red					8
red brown					9
red purple				Copper Glow	10
grey purple				Rudolph	11
<b>16. Leaf: variegation</b> (* )					
absent					1
present				Raelene	9
<b>17. Leaf: main color of upper side (excluding pubescence)</b>					
yellow green				Lemon Frost	1
light green					2
medium green					3
dark green				Pink Cascade	4
blue green					5
red					6
red brown					7
red purple					8
grey purple					9



English	français	deutsch	español	Example Varieties Exemples Beispielsorten Variedades ejemplo	Note/ Nota
<b>18. <u>Varieties with variegated leaves</u> only: Leaf: secondary color of upper side</b>					
yellowish white					1
light yellowish green					2
light green					3
medium green					4
<b>19. Leaf: glossiness of upper side</b>					
absent or very weak					1
weak					3
medium					5
strong					7
very strong					9
<b>20. Leaf: hairiness on lower side</b>					
absent or very slightly hairy					1
slightly hairy					2
strongly hairy					3
<b>21. Inflorescence: position on flowering stem</b>					
only in leaf axils					1
mainly on spurs					2
<b>22. Inflorescence: arrangement of flowers</b>					
solitary					1
in clusters					2

English	français	deutsch	español	Example Varieties Exemples Beispielsorten Variedades ejemplo	Note/ Nota
<b>23. Bud: ratio length/width</b>					
broader than long					1
as long as broad					2
longer than broad					3
<b>24. Bud: shape of tip</b>					
pointed					1
rounded					2
<b>25. Bud: predominant color</b>					
white					1
pink					2
red					3
purple					4
<b>26. Bud: hairiness</b>					
absent or very slightly hairy					1
slightly hairy					2
strongly hairy					3
<b>27. Flower: type</b>					
single				Keatleyi	1
semi double					2
double				Album Flore-pleno, Fairy Rose	3

English	français	deutsch	español	Example Varieties Exemples Beispielsorten Variedades ejemplo	Note/ Nota
<b>28. Flower: diameter</b>					
very small (<5 mm)					1
small (about 10 mm)				<i>Leptospermum neglectum</i>	3
medium (about 20 mm)					5
large (about 30 mm)					7
very large (>35)				Lavender Queen	9
<b>29. Sepal: length in relation to length of petal</b>					
less than one third					1
one third to two thirds					2
more than two thirds					3
<b>30. Sepal: shape of tip</b>					
pointed					1
rounded					2
<b>31. Sepal: predominant color</b>					
white					1
yellow green				Aphrodite	2
medium green				Backwater Beauty	3
pink				Lambethii	4
red				Copper Sheen	5
<b>32. Sepal: hairiness</b>					
absent or very slightly hairy					1
slightly hairy					2
strongly hairy					3

English	français	deutsch	español	Example Varieties Exemples Beispielsorten Variedades ejemplo	Note/ Nota
<b>33. Corolla: arrangement of petals</b>					
free					1
touching					2
overlapping					3
<b>34. Petal: ratio length/width</b>					
broader than long					1
as long as broad					2
longer than broad					3
<b>35. Petal: number of colors visible on upper side</b>					
one					1
two				Keatleyi	2
three				Sunraysia	3
<b>36. <u>Varieties with multicolored petal only</u>: Petal: color pattern</b>					
marginal					1
striated					2
flushed					3
<b>37. Petal: color change with age</b>					
absent					1
present				Nanum	9
<b>38. Petal: main color at first opening</b>					
RHS Colour Chart (indicate reference number)					

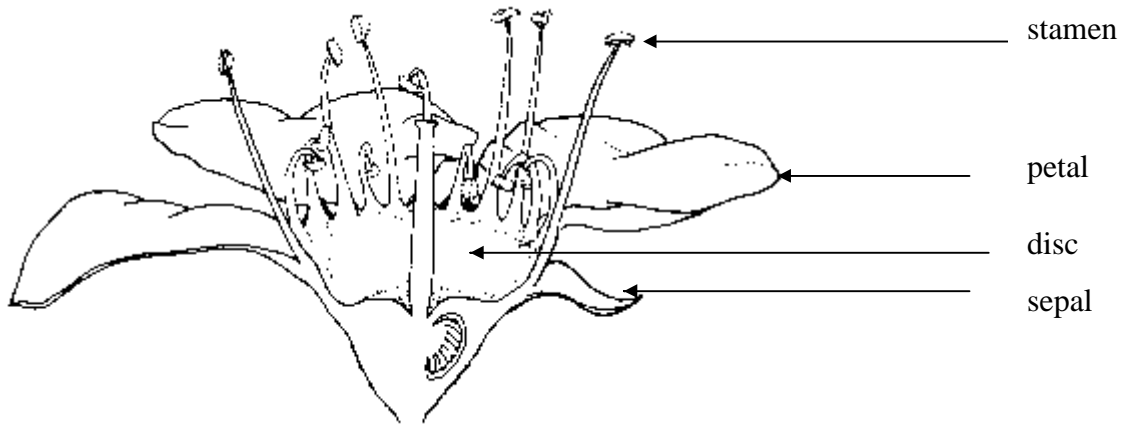
English	français	deutsch	español	Example Varieties Exemples Beispielsorten Variedades ejemplo	Note/ Nota
<hr/>					
<b>39. <u>Varieties with multicolored petal</u> <u>only: Petal: secondary color at first opening</u></b>					
RHS Colour Chart (indicate reference number)					
<hr/>					
<b>40. <u>Petal: main color when aged</u></b>					
RHS Colour Chart (indicate reference number)					
<hr/>					
<b>41. <u>Varieties with multicolored petal</u> <u>only: Petal: secondary color when aged</u></b>					
RHS Colour Chart (indicate reference number)					
<hr/>					
<b>42. <u>Petal: undulation of margin</u></b>					
absent					1
present					9
<hr/>					
<b>43. <u>Petal: reflexing of margin</u></b>					
absent					1
present					9
<hr/>					
<b>44. <u>Disc: diameter</u></b>					
small					3
medium					5
large					7
<hr/>					

English	français	deutsch	español	Example Varieties Exemples Beispielsorten Variedades ejemplo	Note/ Nota
<b>45. Disc: color at first opening</b>					
yellow green					1
light green					2
medium green					3
dark green				Copper Sheen	4
<b>46. Disc: color when aged</b>					
greenish					1
brownish				Lambethii	2
<b>47. Stamen: length relative to length of petal</b>					
up to half as long					1
more than half as long but less than equal					2
equal					3
longer					4
<b>48. Filaments: predominant color</b>					
white				Rudolph, Aphrodite	1
pink					2
red					3
brown					4
<b>49. Fruit: type of capsules</b>					
non-woody					1
woody					2

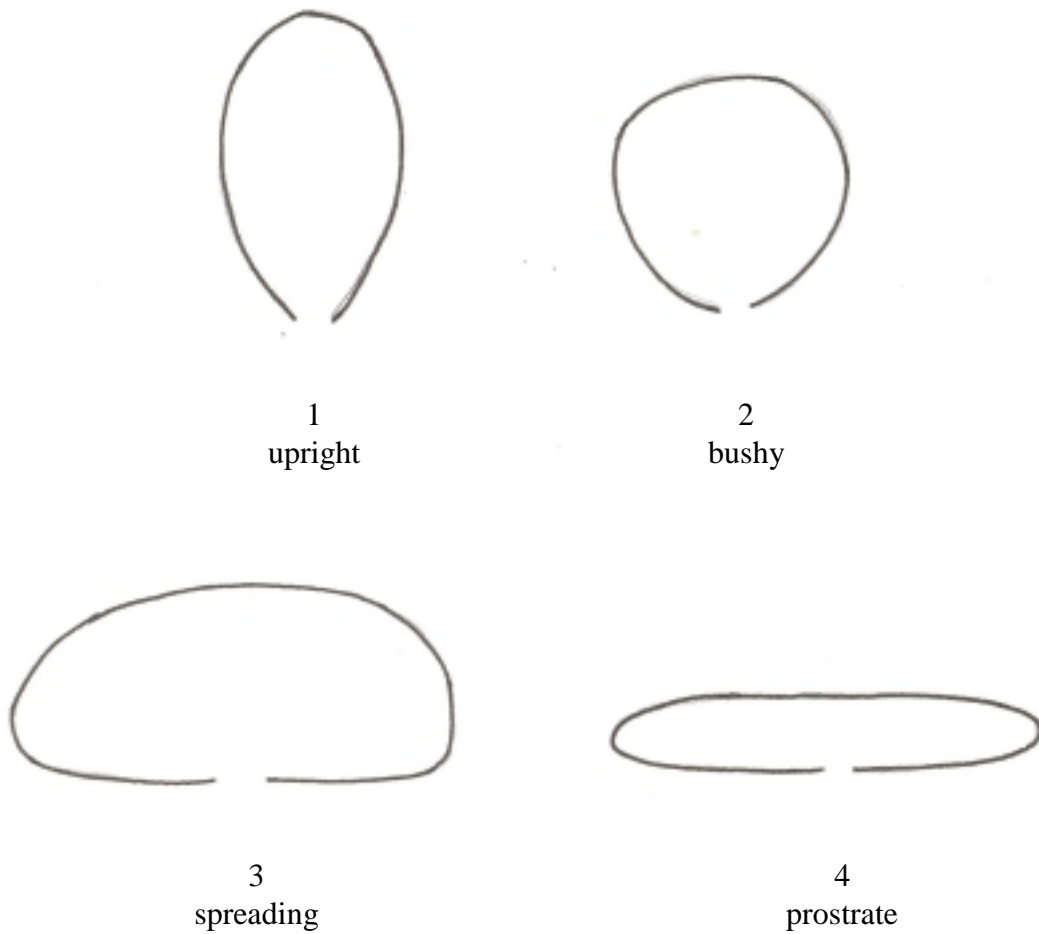
English	français	deutsch	español	Example Varieties Exemples Beispielsorten Variedades ejemplo	Note/ Nota
<b>50. Fruit: size of capsules</b>					
small					3
medium				Aphrodite	5
large				Karo Pearl Star	7
<b>51. Time of beginning of flowering</b>					
early					3
medium					5
late					7
<b>52. Duration of flowering</b>					
short					3
medium					5
long					7

VIII. Explanations on the Table of Characteristics

Half Flower Diagram

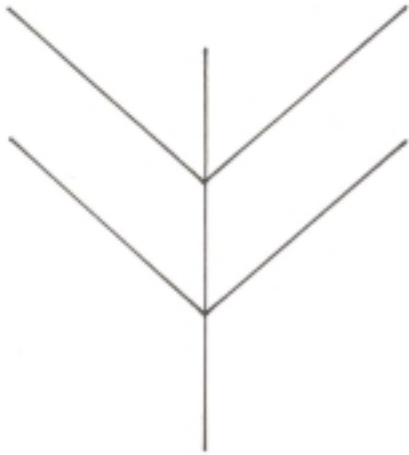


Ad 1: Plant: growth habit

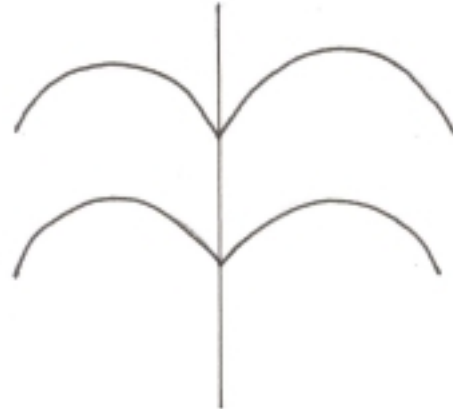




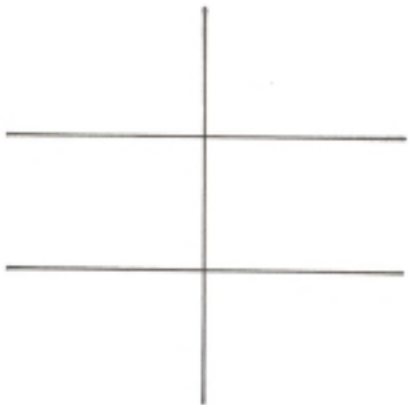
Ad 3: Plant: attitude of branches



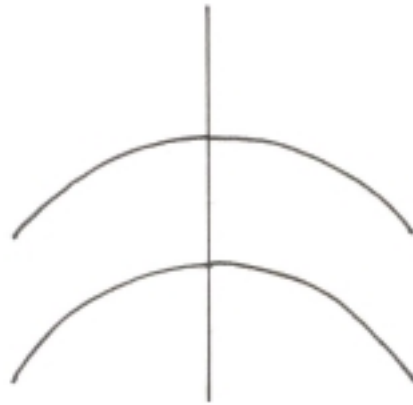
1  
erect



2  
arching



3  
horizontal



4  
weeping

Ad 9: Leaf: attitude to stem



1  
adpressed



2  
oblique



3  
perpendicular

Ad 13: Leaf: profile in cross section



1  
infolded



2  
incurled



3  
flat



4  
recurved

IX. Literature

Clarke, I., Lee, H., 1987: Name that Flower, Melbourne University Press, Carlton, 260 pag.

Elliot, R.W., Jones, D.L., 1993: Encyclopaedia of Australian Plants suitable for cultivation, Volume 6, pp. 111-141, Thomas C. Lothian Pty Ltd., Port Melbourne.

Harden, G. J., 1991: Flora of New South Wales, Volume 2, pp. 154-168, New South Wales University Press, Kensington.

Rowell, R.J., 1991: Ornamental Flowering Shrubs in Australia. New South Wales University Press, Kensington, 321 pag.

X. Technical Questionnaire

	<p>Reference Number (not to be filled in by the applicant)</p>
<p style="text-align: center;"><b>TECHNICAL QUESTIONNAIRE</b> to be completed in connection with an application for plant breeders' rights</p>	
<p>1.1 Genus</p>	<p><i>Leptospermum</i> J.R. Forst. &amp; G. Forst.  TEA TREE</p>
<p>1.2 Species</p>	<p>..... (indicate species)</p>
<p>2. Applicant (Name and address)</p>	
<p>3. Proposed denomination or breeder's reference</p>	

4. Information on origin, maintenance and reproduction of the variety

4.1 Origin

(a) Seedling (indicate parent varieties)

..... [ ]

(b) Mutation (indicate parent variety)

..... [ ]

(c) Discovery (indicate where and when)

..... [ ]

(d) Other (specify)

..... [ ]

4.2 Method of reproduction

– Cuttings [ ]

– *In vitro* propagation [ ]

– Other (specify) [ ]

.....

4.3 Other information

5. Characteristics of the variety to be indicated (the number in brackets refers to the corresponding characteristic in Test Guidelines; please mark the state of expression which best corresponds).

Characteristics	Example Varieties	Note
<b>5.1 Plant: growth habit (1)</b>		
upright	Ruby Glow	1[ ]
bushy	Nanum	2[ ]
spreading	Pacific Beauty	3[ ]
prostrate	Backwater Beauty	4[ ]
<b>5.2 Leaf: main color of upper side (excluding pubescence) (17)</b>		
yellow green	Lemon Frost	1[ ]
light green		2[ ]
medium green		3[ ]
dark green	Pink Cascade	4[ ]
blue green		5[ ]
red		6[ ]
red brown		7[ ]
red purple		8[ ]
grey purple		9[ ]
<b>5.4 Flower: type (27)</b>		
single	Keatleyi	1[ ]
semi double		2[ ]
double	Album Flore-pleno, Fairy Rose	3[ ]

Characteristics	Example Varieties	Note	
<b>5.5i Petal: main color at first opening (38)</b>			
RHS Colour Chart (indicate reference number)	.....		
<b>5.5ii Petal: main color at first opening (38)</b>			
green yellow	Copper Sheen	1[ ]	
white	Pacific Beauty	2[ ]	
red pink	Roseum Flore-pleno	3[ ]	
red purple	Aphrodite	4[ ]	
red	Red Damask	5[ ]	
other color (indicate color)	.....	6[ ]	
<b>6. Similar varieties and differences from these varieties</b>			
Denomination of similar variety	Characteristic in which the similar variety is different <sup>o)</sup>	State of expression of similar variety	State of expression of candidate variety
<sup>o)</sup> In the case of identical states of expressions of both varieties, please indicate the size of the difference.			

7. Additional information which may help to distinguish the variety

7.1 Resistance to pests and diseases

7.2 Special conditions for the examination of the variety

7.3 Other information

A representative color photo of the variety should be added to the Technical Questionnaire.

8. Authorization for release

(a) Does the variety require prior authorization for release under legislation concerning the protection of the environment, human and animal health?

Yes  No

(b) Has such authorization been obtained?

Yes  No

If the answer to that question is yes, please attach a copy of such an authorization.

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