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GENEVA

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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. & G.Forst. of the family Myrtaceae and their hybrids.

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 plants

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. 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, weighing or counting should be made on 10 plants or parts of plants taken from 10 plants 24 months 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

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.

It is recommended that the competent authorities use the following characteristics for grouping varieties:

- (a) Plant: growth habit (characteristic 1)
- (b) Leaf: primary color of upper side (characteristic 17)
- (c) Flower: type (characteristic 27)
- (d) Petal: primary color at first opening (characteristic 41)

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
1. Plant: habit					
upright				Ruby Glow	1
bushy				Nanum	2
spreading				Pacific Beauty	3
prostrate				Backwater Beauty	4
2. Plant: height					
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>L. laevigatum</i>	9
3. Plant: diameter					
narrow (<1 m)					3
medium (about 1.5 m)				Julie Ann	5
broad (about 2.5 m)				Album Flore-pleno	7
4. Plant: density					
sparse				Ruby Glow	3
medium					5
dense				Roseum Flore-pleno	7

English	français	deutsch	español	Example Varieties Exemples Beispielsorten Variedades ejemplo	Note/ Nota
5. Young stem: color					
yellow green					1
light green					2
medium green					3
red green					4
red					5
purple					6
6. Young stem: hairiness					
absent					1
present					9
7. Branches: attitude					
erect					1
arching				Pink Cascade	2
horizontal					3
weeping				BY18, Cardwell	4
8. Branches: texture of bark					
smooth					1
papyraceous					2
fibrous					3
9. Leaf: attitude to stem					
adpressed					3
oblique					5
perpendicular					7

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

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

English	français	deutsch	español	Example Varieties Exemples Beispielsorten Variedades ejemplo	Note/ Nota
23. Bud: length to width ratio					
broader than long					3
as long as broad					5
longer than broad					7
24. Bud: shape of tip					
pointed					1
rounded					2
25. Bud: predominant color					
white					1
pink					2
red					3
purple					4
26. Bud: hairiness					
absent					1
slightly hairy					2
strongly hairy					3
27. Flower: type					
single				Keatleyi	1
semi double					2
double				Album Flore-pleno, Fairy Rose	3
28. Flower: diameter					
very small (<5 mm)					1
small (about 10 mm)				<i>L. neglectum</i>	3
medium (about 20 mm)					5
large (about 30 mm)					7
very large (>35)				Lavender Queen	9

English	français	deutsch	español	Example Varieties Exemples Beispielsorten Variedades ejemplo	Note/ Nota
29. Calyx tube: hairiness					
absent					1
slightly hairy					2
strongly hairy					3
30. Calyx tube: texture					
smooth					1
ribbed/striate				<i>L. maxwellii</i>	2
wrinkled					3
31. Sepal: size					
small					3
medium					5
large					7
32. Sepals: length in relation to length of petals					
one third					3
half					5
two thirds					7
33. Sepal: shape of tip					
pointed					1
rounded					2
34. Sepal: predominant color					
white					1
yellow green				Aphrodite	2
medium green				Backwater Beauty	3
red				Copper Sheen	4
pink				Lambethii	5

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
35. Sepal: hairiness					
absent					1
slightly hairy					2
strongly hairy					3
36. Corolla: arrangement of petals					
free					1
touching					2
overlapping					3
37. Petal: ratio of length to width					
broader than long					3
as long as broad					5
longer than broad					7
38. Petal: number of colors visible					
one					1
two				Keatleyi	2
three				Sunraysia	3
39. <u>Varieties with multicolored petal only</u>: Petal: color pattern					
edged					1
striated					2
flushed					3
40. Petal: color change with age					
absent					1
present				Nanum	9

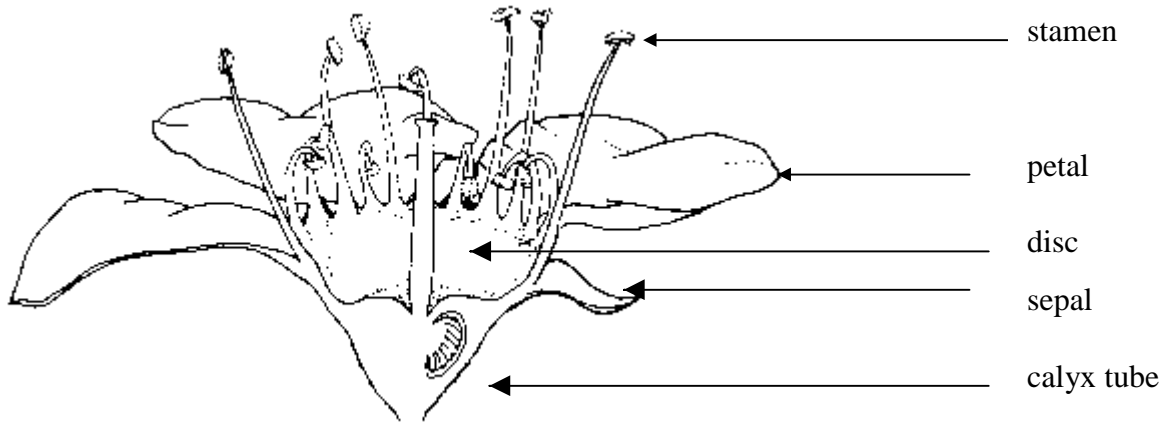
English	français	deutsch	español	Example Varieties Exemples Beispielsorten Variedades ejemplo	Note/ Nota
<hr/>					
41. Petal: primary color at first opening					
RHS Colour Chart (indicate reference number)					
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42. <u>Varieties with multicolored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

English	français	deutsch	español	Example Varieties Exemples Beispielsorten Variedades ejemplo	Note/ Nota
48. Disc: color at first opening					
yellow green					1
light green					2
medium green					3
dark green				Copper Sheen	4
48. Disc: color at first opening					
yellow green					1
light green					2
medium green					3
dark green				Copper Sheen	4
49. Disc: color when aged					
green					1
red brown				Lambethii	2
50. Stamens: length in relation to length of petals					
up to half as long					1
more than half as long but less than equal					2
equal					3
longer					4
51. Filaments: predominant color					
white				Rudolph, Aphrodite	1
pink					2
red					3
brown					4

English	français	deutsch	español	Example Varieties Exemples Beispielsorten Variedades ejemplo	Note/ Nota
52. Fruit: type of capsules					
woody					1
non woody					2
53. Fruit: size of capsules					
small					3
medium				Aphrodite	5
large				Karo Pearl Star	7
54. Time of beginning of flowering					
early					3
medium					5
late					7
55. Time of end of flowering					
early					3
medium					5
late					7

VIII. Explanations on the Table of Characteristics

Half Flower Diagram



IX. Literature

Clarke, I. and Lee, H.. (1987) *Name that Flower*. Melbourne University Press.

Elliot, R.W. and Jones, D.L. (1993) *Encyclopaedia of Australian Plants suitable for cultivation Volume 6*. Thomas C. Lothian Pty Ltd.

Harden, G. J. (1991) *Flora of New South Wales Volume 2*. New South Wales University Press.

Rowell, R.J. (1991) *Ornamental Flowering Shrubs in Australia*. New South Wales University Press.

X. Technical Questionnaire

	Reference Number (not to be filled in by the applicant)
<p>TECHNICAL QUESTIONNAIRE to be completed in connection with an application for plant breeders' rights</p>	
1. Species	<p><i>Leptospermum</i> Forster & G. Forster TEA TREE</p>
2. Applicant (Name and address)	
3. Proposed denomination or breeder's reference	

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 []

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

Characteristics		Example Varieties	Note
5.5 Petal: primary color at first opening			
green yellow		Copper Sheen	[]
white		Pacific Beauty	[]
red pink		Roseum Flore-pleno	[]
red purple		Aphrodite	[]
red		Red Damask	[]
6. Similar varieties and differences from these varieties			
Denomination of similar variety	Characteristic in which the similar variety is different ^{o)}	State of expression of similar variety	State of expression of candidate variety
<p>^{o)} In the case of identical states of expressions of both varieties, please indicate the size of the difference.</p>			

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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