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**WORKING PAPER ON TEST GUIDELINES FOR CLEMATIS
(*Clematis* L.)**

Document prepared by experts from Canada

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I. Subject of these Guidelines

These Test Guidelines apply to all varieties of *Clematis* L. of the family Ranunculaceae.

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 of commercial standard or
enough seeds to raise at least 10 plants of commercial standard.

2. The plant material supplied should be visibly healthy, not lacking in vigour 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 independent growing cycle after establishment. If distinctness and/or uniformity cannot be sufficiently established in one independent growing cycle, the test should be extended for a second independent growing cycle.

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 normally 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. As a minimum, each test should include a total of 10 plants. Separate plots for observation and 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 each of 10 plants.

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 leaf should be made on mature leaves taken from the middle third of the current season's shoots. For varieties with compound leaves, the leaf blade characteristics should be based on the terminal leaflet.
4. All observations on the flower should be made during the first flowering period of the season.
5. For varieties with semi-double or double flowers, all observations on the sepals should be made on the first complete whorl of outer sepals.
6. 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 tolerances set out in 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: sex (characteristic 1)
 - (b) Leaf: type (characteristic 10)
 - (c) Flower: type (characteristic 29)
 - (d) Single and semi-double varieties only: Flower: shape of perianth (characteristic 31)
 - (e) Flower: diameter (characteristic 32)
 - (f) Sepal: type of coloration (characteristic 41)
 - (g) Sepal: main color of upper side (characteristic 42) with the following groups:
 - Gr. 1: white
 - Gr. 2: yellow
 - Gr. 3: pink
 - Gr. 4: red
 - Gr. 5: purple
 - Gr. 6: violet
 - Gr. 7: blue
 - Gr. 8: green
 - (h) Habit of flowering (characteristic 59)

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: sex					
(*)					
female				Early Sensation	1
male				Joe, Limelight	2
hermaphrodite				Perle d'Azur	3
2. Plant: persistence of leaves					
deciduous				Gipsy Queen	1
evergreen				<i>Clematis cirrhosa</i> , Fairy, Apple Blossom	2
3. Plant: climbing habit					
(*)					
non-climbing				<i>Clematis integrifolia</i>	1
climbing				<i>Clematis montana</i>	2
4. <u>Non-climbing varieties only:</u> Plant: growth habit					
(*)					
upright				<i>Clematis integrifolia</i>	1
semi-upright					5
prostrate				Joe, Pixie	9
5. <u>Non-climbing varieties only:</u> Plant: height at flowering					
(*)					
very short					1
short					3
medium					5
tall					7
very tall					9

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
6. Young shoot: presence of anthocyanin coloration					
absent				Comtesse de Bouchard	1
present				Magic Star	9
7. Young shoot: intensity of anthocyanin coloration					
weak					3
medium					5
strong					7
8. Young shoot: presence of pubescence					
absent					1
present				<i>Clematis montana</i>	9
9. Young shoot: density of pubescence					
sparse					3
medium					5
dense					7
10. Leaf: type					
(*)					
(+)					
simple				<i>Clematis integrifolia</i>	1
ternate				Sylia Denny, Hainton Ruby	2
biterminate				Frances Ravis, <i>Clematis macropetala</i>	3
pinnate				Golden Harvest, Vanessa	4
bipinnate				<i>Clematis viticella</i>	5

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
11. Leaf blade: length					
(*)					
short					3
medium					5
long					7
12. Leaf blade: width					
(*)					
narrow					3
medium					5
broad					7
13. Leaf blade: ratio of length/width					
broader than long					1
as broad as long					2
longer than broad					3
14. Leaf blade: shape					
(*)					
(+)					
lanceolate					1
ovate					2
elliptic					3
obovate					4
rhombic					5
cordate					6

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
15. Leaf blade: shape of tip					
(*)					
(+)					
acuminate					1
acute					2
cuspidate					3
rounded					4
16. Leaf blade: shape of base					
acute					1
obtuse					2
rounded					3
cordate					4
17. Leaf blade: margin					
entire				Sheila Thacker	1
sinuate					2
crenate				Taupo	3
dentate					4
serrate					5
18. Leaf blade: lobing					
absent					1
present					9
19. <u>Lobed varieties</u> <u>only: Leaf blade:</u> <u>number of lobes</u>					
two					1
three to four					2
more than four					3

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
20. <u>Lobed varieties</u>					
(+) <u>only: Leaf blade:</u>					
<u>depth of sinus</u>					
<u>between lobes</u>					
shallow					3
medium					5
deep					7
21. <u>Leaf blade: main</u>					
<u>color of upper side</u>					
yellow green				Duchess of Edinburgh	1
light green				Burford White	2
medium green				Lady Northcliffe	3
dark green				Bowl of Beauty	4
blue green				My Angel, <i>Clematis texensis</i>	
grey green				Tibetan Mix	5
brown green					6
bronze				Mayleen	7
22. <u>Leaf blade:</u>					
<u>variegation</u>					
absent				Mrs. George Jackman	1
present				Gokanosho	9
23. <u>Varieties with</u>					
<u>variegated leaves</u>					
<u>only: Leaf blade:</u>					
<u>secondary color</u>					
white				Gokanosho	1
yellow					2
grey					3

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
24. Leaf blade: rugosity of upper surface					
absent or very weakly expressed					1
weakly expressed					2
strongly expressed					3
25. Leaf blade: hairiness on lower side (*)					
absent				<i>Clematis flammula</i>	1
present				Lord Peter, <i>Clematis virginiana</i>	9
26. Leaf blade: density of hairs on lower side (*)					
sparse				<i>Clematis viticella</i> subsp. <i>campaniflora</i>	3
medium					5
dense				<i>Clematis chrysocoma</i>	7
27. Flowers: arrangement (*)					
solitary				Evisix, Black Prince	
clusters				<i>Clematis arandii</i>	
28. Flower: fragrance					
absent				Evijohill, Comtesse de Bouchard	1
weakly present				Primrose Star, Freckles	2
strongly present				Fair Rosamond, Mayleen	3

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
29. Flower: type					
(*)					
(+)					
single				Nelly Moser, Perle d'Azur	1
semi-double				Caroline Lloyd, Marjorie	2
double				Multi Blue, Kiri Te Kanawa	3
30. Flower: attitude					
erect					1
horizontal					2
drooping				Evisix	3
31. <u>Single and semi-double varieties</u>					
(*)					
(+)					
<u>only: Flower: shape of perianth</u>					
tubular				Wyevale	1
campanulate				<i>Clematis alpina</i> , Étoile Rose	2
urceolate				<i>Clematis viorna</i> , Phil Mason	3
rotate				Nelly Moser, Lady Northcliffe	4
32. Flower: diameter					
(*)					
very small					1
small				Little Nell	3
medium				Perle d'Azur	5
large				Evista	7
very large				Fairy Queen, Kacper	9

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
33. <u>Single and semi-double varieties</u>					
(*) <u>only: Flower: number of sepals (excluding petaloids)</u>					
four				Tetrarose, Bill MacKenzie	1
four to six					2
only six				Empress of India, Frau Mikiko	3
six to eight				Fireworks, Dawn, Haku Ookan	4
only eight				Midnight, Sandra Denny	5
more than eight				Mrs. George Jackman	6
34. <u>Flower: arrangement of sepals</u>					
free				Black Prince	3
touching				Iubileinyi-70	5
overlapping				Horn of Plenty, Ivan Olssen	7
35. <u>Sepal: length</u>					
(*)					
short					3
medium					5
long					7
36. <u>Sepal: width</u>					
(*)					
narrow					3
medium					5
broad					7

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
37. Sepal: shape					
(*)					
lanceolate					1
ovate				Scartho Gem	2
elliptic				Daniel Deronda	3
rhombic				Iubileinyi-70	4
obovate				Prince Charles	5
spatulate				Teshio	6
38. Sepal: shape in cross-section					
concave					1
flat					2
convex					3
39. Sepal: reflexing of apex					
(*)					
absent or very weak				Henryi	1
weak					3
medium					5
strong				Pagoda	7
very strong					9
40. Sepal: shape of tip					
(+)					
acuminate				Belle of Woking	1
acute				Helios	2
cuspidate				Mrs. Cholmondeley	3
obtuse				Starlight	4
retuse				Tetra Rose	6

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
41. Sepal: type of coloration (*)					
single colored				Lady Northcliffe	1
bi-colored				Nelly Moser, Evione	2
42. Sepal: main color of upper side (*)					
RHS Colour Chart (indicate reference number)					
43. <u>Single colored varieties only:</u> Sepal: color distribution (*)					
uniform					1
lighter towards middle					2
lighter towards margins					3
44. <u>Bi-colored varieties only:</u> Sepal: secondary color of upper side (*)					
RHS Colour Chart (indicate reference number)					
45. <u>Bi-colored varieties only:</u> Sepal: distribution of secondary color on upper side (*)					
edged				Little Nell	1
along mid-rib				Nelly Moser	2
speckled				Freckles	3
striped					4
along veins				Pagoda, Tango	5

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
46. Sepal: main color of lower side (*)					
RHS Colour Chart (indicate reference number)					
47. <u>Bi-colored varieties</u> (*) only: Sepal: secondary color of lower side					
RHS Colour Chart (indicate reference number)					
48. Sepal: hairiness on lower side					
absent or very sparse					1
sparse					3
medium					5
dense				<i>Clematis hirsutissima</i>	7
very dense				<i>Clematis fusca</i>	9
49. Sepal: undulation of margin (*)					
absent or very weak				Henryi, Barbara Jackman	1
weak				Horn of Plenty	3
medium				Corona, Belle Nantaise	5
strong				Evirin, Lord Nevill	7
very strong				Katharina, The First Lady	9
50. Sepal: twisting along longitudinal axis					
absent				Nelly Moser	1
present				Evisix	9

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
51. Petaloid staminodes					
absent				Bill MacKenzie, Ville de Lyon	1
present				Sieboldii, Lemon Bells	9
52. <u>Varieties with petaloid staminodes:</u> Staminodes: number					
few					3
medium					5
many				Sieboldii	7
53. <u>Varieties with petaloid staminodes:</u> Staminodes: main color of upper side					
greenish white				Plena	1
yellow					2
orange					3
pink					4
red					5
purple				Sieboldii	6
violet					7
blue					8
green					9

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
54. <u>Male and hermaphrodite varieties only:</u> Filament: color					
white				Laura Denny, Poulala	1
cream				Jan Pawell II	2
greenish yellow				Little Nell, Minuet	3
green				Pagoda	4
pink				Cotton Candy, Evione	5
red				Richard Pennell	6
purple				Tibetan Max	7
brown purple				Helios	8
violet				Shikoo	9
55. <u>Male and hermaphrodite varieties only :</u> Anther: color					
white				Pink Minnie	1
cream				Pixie, Gravetye Beauty	2
yellow				Evifive, Lasurstern	3
pink					4
red				Fireworks, Evirin	5
reddish purple				Marcel Moser, Fair Rosamond	6
purple				Ilka, Fantaziia	7
brown				Mrs. Cholmondeley	8
56. <u>Hermaphrodite varieties only:</u> Pistil: height relative to height of stamens					
below					1
at same level					2

above						3
English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota	
57. <u>Female and hermaphrodite varieties only:</u> Stigma: color						
white					1	
yellow					2	
pink					3	
red					4	
purple					5	
brown					6	
58. <u>Female and hermaphrodite varieties only:</u> Style: color						
white					1	
yellow					2	
pink					3	
purple					4	
59. <u>Habit of flowering</u> (*)						
only on previous year's growth				Elizabeth	1	
on both previous year's and current year's growth				Haku Ookan, Kacper, Nelly Moser	2	
only on current year's growth				Jackmanii	3	
60. <u>Time of flowering</u> (*)						
early				Apple Blossom, Elizabeth	3	
mid-season				Henryi, Titania	5	

VIII. Explanations on the Table of Characteristics

Ad. 10: Leaf: type

To be added

1
simple

2
ternate

3
biternate

4
pinnate

5
bipinnate

Ad. 14: Leaf blade: shape

To be added

1
lanceolate

2
ovate

3
elliptic

To be added

4

5

6

obovate

rhombic

cordate

Ad. 15: Leaf blade: shape of tip

To be added

1
acuminate

2
acute

3
cuspidate

4
rounded

Ad. 20: Lobed varieties only: Leaf blade: depth of sinus between lobes

To be added

3
shallow

5
medium

7
deep

Ad. 29: Flower: type

To be added

1
single

2
semi-double

3
double

Ad. 31: Single and semi-double varieties only: Flower: shape of perianth

To be added

1
tubular

2
campanulate

3
orceolate

4
rotate

Ad. 40: Sepal: shape of tip

To be added

1
acuminate

2
acute

3
cuspidate

4
obtuse

5
retuse

IX.

Literature

Evison, R., 1998: *The Gardener's Guide to Growing Clematis*, David & Charles Publishers, Devon, U.K.

Huxley, A. (ed.), Griffiths, M. (ed.), Levy, M. (ed.) 1999: *The Royal Horticultural Society Dictionary of Gardening*, McMillan Reference Ltd., London (Volume I, pp. 641-651).

Krüssmann, G. 1984: *Manual of Cultivated Broad-Leaved Trees & Shrubs*, Timber Press, Beaverton, Oregon (Volume I, pp. 339-353).

X. Technical Questionnaire

	<p>Reference Number (not to be filled in by the applicant)</p>
<p>TECHNICAL QUESTIONNAIRE to be completed in connection with an application for plant breeders' rights</p>	
<p>1.1 Genus</p>	<p><i>Clematis</i> L. CLEMATIS</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

(a) Cuttings []

(b) *In vitro* propagation []

(c) Seed []

(d) 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
5.1 (1)	Plant: sex		
	female	Early Sensation	1[]
	male	Joe, Limelight	2[]
	hermaphrodite	Perle d'Azur	3[]
5.2 (10)	Leaf: type		
	simple	<i>Clematis integrifolia</i>	1[]
	ternate	Sylia Denny, Hainton Ruby	2[]
	biterminate	Frances Rivis, <i>Clematis macropetala</i>	3[]
	pinnate	Golden Harvest, Vanessa	4[]
	bipinnate	<i>Clematis viticella</i>	5[]
5.3 (29)	Flower: type		
	single	Nelly Moser, Perle d'Azur	1[]
	semi-double	Caroline Lloyd, Marjorie	2[]
	double	Multi Blue, Kiri Te Kanawa	3[]
5.4 (31)	<u>Single and semi-double varieties only:</u> Flower: shape of perianth		
	tubular	Wyevale	1[]
	campanulate	<i>Clematis alpina</i> , Étoile Rose	2[]
	urceolate	<i>Clematis viorna</i> , Phil Mason	3[]
	rotate	Nelly Moser, Lady Northcliffe	4[]

	Characteristics	Example Varieties	Note
5.5 (32)	Flower: diameter		
	very small		1[]
	small	Little Nell	3[]
	medium	Perle d'Azur	5[]
	large	Evista	7[]
	very large	Fairy Queen, Kacper	9[]
5.6 (41)	Sepal: type of coloration		
	single colored	Lady Northcliffe	1[]
	bi-colored	Nelly Moser, Evione	2[]
5.7i (42)	Sepal: main color of upper side		
	RHS Colour Chart (indicate reference number)	
5.7ii (42)	Sepal: main color of upper side		
	white		1[]
	yellow		2[]
	pink		3[]
	red		4[]
	purple		5[]
	violet		6[]
	blue		7[]
	green		8[]
5.8 (59)	Habit of flowering		
	only on previous year's growth	Elizabeth	1[]
	on both previous year's and current year's growth	Haku Ookan, Kacper, Nelly Moser	2[]
	only on current year's growth	Jackmanii	3[]

6. Similar varieties and differences between 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
---------------------------------	------------------------------------------------------------------------	----------------------------------------	------------------------------------------

^{o)} 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 cultivation and examination of the variety

7.3 Use:

garden plant

container plant

other (specify)

.....

7.4 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.

[End of document]