TG/DAHLIA(proj.3)
ORIGINAL: English
DATE: July 1, 2004

UPOV

INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

GENEVA

DRAFT

DAHLIA

UPOV Code: DAHLI

(Dahlia *Cav.*)

*

GUIDELINES

FOR THE CONDUCT OF TESTS

FOR DISTINCTNESS, UNIFORMITY AND STABILITY

prepared by an expert from the United Kingdom

to be considered by the
Technical Working Party for Ornamental Plants and Forest Trees
at its thirty-seventh session,
to be held in Hanover, Germany, from July 12 to 16, 2004

Alternative Names:*

Latin	*English*	*French*	*German*	*Spanish*
Dahlia Cav.	Dahlia	{Common Name(s)} {Alt. Common Name(s)}	{Common Name(s)} {Alt. Common Name(s)}	{Common Name(s)} {Alt. Common Name(s)}

The purpose of these guidelines ("Test Guidelines") is to elaborate the principles contained in the General Introduction (document TG/1/3), and its associated TGP documents, into detailed practical guidance for the harmonized examination of distinctness, uniformity and stability (DUS) and, in particular, to identify appropriate characteristics for the examination of DUS and production of harmonized variety descriptions.

ASSOCIATED DOCUMENTS

These guidelines ("Test Guidelines") should be read in conjunction with document TG/1/3, "General Introduction to the Examination of Distinctness, Uniformity and Stability and the Development of Harmonized Descriptions of New Varieties of Plants" (hereinafter referred to as the "General Introduction") and its associated "TGP" documents.

* These names were correct at the time of the introduction of these Test Guidelines but may be revised or updated. [Readers are advised to consult the UPOV Code, which can be found on the UPOV Website (www.upov.int), for the latest information.]

TABLE OF CONTENTS PAGE

1. Subject of these Test Guidelines

These Test Guidelines apply to all varieties of *Dahlia* Cav.

2. Material Required

2.1 The competent authorities decide on the quantity and quality of the plant material required for testing the variety and when and where it is to be delivered. Applicants submitting material from a State other than that in which the testing takes place must ensure that all customs formalities and phytosanitary requirements are complied with.

2.2 The material is to be supplied in the form of rooted cuttings or tubers.

2.3 The minimum quantity of plant material, to be supplied by the applicant, should be:

18 rooted cuttings or 18 tubers

2.4 The plant material supplied should be visibly healthy, not lacking in vigor, nor affected by any important pest or disease.

2.5 The plant material should not have undergone any treatment which would affect the expression of the characteristics of the variety, unless the competent authorities allow or request such treatment. If it has been treated, full details of the treatment must be given.

3. Method of Examination

3.1 Duration of Tests

The minimum duration of tests should normally be a single growing cycle.

3.2 Testing Place

The tests should normally be conducted at one place. If any characteristics of the variety, which are relevant for the examination of DUS, cannot be observed at that place, the variety may be tested at an additional place.

3.3 Conditions for Conducting the Examination

The tests should be carried out under conditions ensuring satisfactory growth for the expression of the relevant characteristics of the variety and for the conduct of the examination.

3.3.1 Observation of color by eye

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 the British Standard 950, Part I. These determinations should be made with the plant part placed against a white background.

3.4 Test Design

3.4.1 Each test should be designed to result in a total of at least 12 plants.

3.4.2 The design of the tests should be such that plants or parts of plants may be removed for measurement or counting without prejudice to the observations which must be made up to the end of the growing cycle.

3.5 Number of Plants / Parts of Plants to be Examined

Unless otherwise indicated, all observations on single plants should be made on 10 plants or parts taken from each of 10 plants and any other observations made on all plants in the test.

3.6 Additional Tests

Additional tests, for examining relevant characteristics, may be established.

4. Assessment of Distinctness, Uniformity and Stability

4.1 Distinctness

4.1.1 General Recommendations

It is of particular importance for users of these Test Guidelines to consult the General Introduction prior to making decisions regarding distinctness. However, the following points are provided for elaboration or emphasis in these Test Guidelines.

4.1.2 Consistent Differences

The minimum duration of tests recommended in Section 3.1 reflects, in general, the need to ensure that any differences in a characteristic are sufficiently consistent.

4.1.3 Clear Differences

Determining whether a difference between two varieties is clear depends on many factors, and should consider, in particular, the type of expression of the characteristic being examined, i.e. whether it is expressed in a qualitative, quantitative, or pseudo-qualitative manner. Therefore, it is important that users of these Test Guidelines are familiar with the recommendations contained in the General Introduction prior to making decisions regarding distinctness.

4.2 Uniformity

4.2.1 It is of particular importance for users of these Test Guidelines to consult the General Introduction prior to making decisions regarding uniformity. However, the following points are provided for elaboration or emphasis in these Test Guidelines:

4.2.2 For the assessment of uniformity in vegetatively propagated varieties, a population standard of 1% and an acceptance probability of at least 95 % should be applied. In the case of a sample size of 12 plants, 1 off-type is allowed.

4.2.3 For the assessment of uniformity of seed-propagated varieties, the recommendations in the General Introduction for cross-pollinated/hybrid varieties should be followed, as appropriate.

4.3 Stability

4.3.1 In practice, it is not usual to perform tests of stability that produce results as certain as those of the testing of distinctness and uniformity. However, experience has demonstrated that, for many types of variety, when a variety has been shown to be uniform, it can also be considered to be stable.

4.3.2 Where appropriate, or in cases of doubt, stability may be tested, either by growing a further generation, or by testing a new plant stock to ensure that it exhibits the same characteristics as those shown by the previous material supplied.

5. Grouping of Varieties and Organization of the Growing Trial

5.1 The selection of varieties of common knowledge to be grown in the trial with the candidate varieties and the way in which these varieties are divided into groups to facilitate the assessment of distinctness is aided by the use of grouping characteristics.

5.2 Grouping characteristics are those in which the documented states of expression, even where produced at different locations, can be used, either individually or in combination with other such characteristics: (a) to select varieties of common knowledge that can be excluded from the growing trial used for examination of distinctness; and (b) to organize the growing trial so that similar varieties are grouped together.

5.3 The following have been agreed as useful grouping characteristics:

(a) Leaf color (characteristic 9)
(b) Flower head: type (characteristic 25)
(c) Flower head: diameter (characteristic 26)
(d) Ray floret: number of colors of the inner side (characteristic 46)
(e) Ray floret: main color of the inner side by group (characteristic 51)

5.4 Guidance for the use of grouping characteristics, in the process of examining distinctness, is provided through the General Introduction.

6. Introduction to the Table of Characteristics

6.1 Categories of Characteristics

6.1.1 Standard Test Guidelines Characteristics

Standard Test Guidelines characteristics are those which are approved by UPOV for examination of DUS and from which members of the Union can select those suitable for their particular circumstances.

6.1.2 Asterisked Characteristics

Asterisked characteristics (denoted by *) are those included in the Test Guidelines which are important for the international harmonization of variety descriptions and should always be examined for DUS and included in the variety description by all members of the Union, except when the state of expression of a preceding characteristic or regional environmental conditions render this inappropriate.

6.2 States of Expression and Corresponding Notes

States of expression are given for each characteristic to define the characteristic and to harmonize descriptions. Each state of expression is allocated a corresponding numerical note for ease of recording of data and for the production and exchange of the description.

6.3 Types of Expression

An explanation of the types of expression of characteristics (qualitative, quantitative and pseudo-qualitative) is provided in the General Introduction.

6.4 Example Varieties

Where appropriate, example varieties are provided to clarify the states of expression of each characteristic.

6.5 Legend

(*) Asterisked characteristic – see Section 6.1.2

(QL) Qualitative characteristic – see Section 6.3
(QN) Quantitative characteristic – see Section 6.3
(PQ) Pseudo-qualitative characteristic – see Section 6.3

(a) – (d) See Explanations on the Table of Characteristics in Chapter 8, Section 8.1

(+) See Explanations on the Table of Characteristics in Chapter 8 , Section 8.2.

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

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
1. **(+)**		**Plant: growth habit**					
PQ		upright					1
		semi-upright					2
		rounded					3
		spreading					4
2. **(*)**		**Plant: height**					
QN		short					3
		medium					5
		tall					7
3.		**Stem: colour**					
PQ	**(a)**	green					1
		green tinged with purple or brownish-red					2
		brownish-red					3
		purple					4
4. **(*)** **(+)**		**Leaf: predominant type**					
PQ	**(b)**	simple					1
		pinnate					2
		bipinnate					3
5.		**Leaf: wing**					
QN	**(b)**	absent or very weakly present					1
		weakly present					2
		strongly present					3

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
6. (*) (+)		**Leaf: length including petiole**					
QN	**(b)**	short					3
		medium					5
		long					7
7. (*) (+)		**Leaf: width**					
QN	**(b)**	narrow					3
		medium					5
		broad					7
8. (*)		**Leaf: length/ width ratio**					
QN	**(b)**	low					3
		medium					5
		high					7
9. (*)		**Leaf: color**					
PQ	**(b)**	light green					1
		medium green					2
		dark green					3
		green tinged with purple					4
		green tinged with bronze					5
		bronze					6
		purple					7

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
10.		**Leaf: glossiness**					
QN	**(b)**	weak					3
		medium					5
		strong					7
11.		**Leaf : texture of surface**					
QN	**(b)**	smooth or very weakly rugose					1
		weakly rugose					2
		strongly rugose					3
12.		**Leaf : veins**					
QN	**(b)**	depressed					3
		flat					5
		raised					7
13.		**Simple leaves only: leaf: shape**					
PQ	**(b)**	elliptic					1
		ovate					2
		lanceolate					3
14.		**Simple leaves only: leaf: shape of base**					
PQ	**(b)**	acute					1
		obtuse					2
		rounded					3
		cordate					4
		truncate					5
		asymmetric					6

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
15.		**Simple leaves only: leaf: shape of apex**					
PQ	**(b)**	acuminate					1
		acute					2
		rounded					3
16.		**Compound leaves only: terminal leaflet: shape**					
PQ	**(b)**	elliptic					1
		ovate					2
		lanceolate					3
17.		**Compound leaves only: terminal leaflet: shape of base**					
PQ	**(b)**	acute					1
		obtuse					2
		rounded					3
		cordate					4
		truncate					5
		asymmetric					6
18.		**Compound leaves only: terminal leaflet: shape of apex**					
PQ	**(b)**	acuminate					1
		acute					2
		rounded					3

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
19.		**Leaf margin: number of incisions**					
QN	**(b)**	few					3
		medium					5
		many					7
20.		**Leaf margin: depth of incisions**					
QN	**(b)**	shallow					3
		medium					5
		deep					7
21.		**Peduncle: length**					
QN		short					3
		medium					5
		long					7
22. (*)		**Peduncle: colour**					
PQ		green					1
		green tinged with purple or brownish-red					2
		brownish-red					3
		purple					4
23. (*)		**Flower heads: position in relation to foliage**					
QN		high above foliage					1
		moderately above foliage					2
		at same level					3
		below foliage					4

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
24. **(+)**	**Flower head: attitude**					
QN	upright					1
	semi erect					3
	horizontal					5
	nodding					7
25. **(*)** **(+)**	**Flower head: type**					
PQ	single					1
	semi-double					2
	anemone					3
	collerette					4
	daisy-eyed double					5
	double					6
26. **(*)**	**Flower head: diameter**					
QN	small					3
	medium					5
	large					7
27.	**Double and daisy eyed double varieties only: Flower head: height**					
QN	short					3
	medium					5
	tall					7

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
28. (*)		**<u>Excluding double flowered varieties</u>: Flower head: number of ray florets**					
QN		few					3
		medium					5
		many					7
29. (*)		**<u>Double flowered varieties only</u>: Flower head: density of ray florets**					
QN		sparse					3
		medium					5
		dense					7
30.		**<u>Collerette varieties only</u>: Collar segments: length relative to ray florets**					
QN		much shorter					1
		moderately shorter					2
		same length					3
31. (*)		**Ray floret: length**					
QN	**(c)**	short					3
		medium					5
		long					7
32. (*)		**Ray floret: width**					
QN	**(c)**	narrow					3
		medium					5
		broad					7

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
33. (*)		**Ray floret: length/ width ratio**					
QN	**(c)**	low					3
		medium					5
		high					7
34. (*) (+)		**Ray floret: surface**					
PQ	**(d)**	smooth					1
		ribbed					2
		keeled					3
35. (*) (+)		**<u>Keeled florets only:</u> ray floret: number of keels**					
PQ	**(d)**	one					1
		two					2
		more than two					3
36. (*)		**Ray floret: profile in cross section**					
PQ	**(d)**	concave					1
		flat					2
		convex					3
37. (*) (+)		**Non-flat ray florets only: degree of concavity or convexity**					
QN	**(d)**	weak					3
		medium					5
		strong					7

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
38. (*)		**Ray floret: rolling of margin**					
QL	**(d)**	absent					1
		present					9
39 (*) (+)		**Ray floret: type of rolling of margin**					
PQ	**(d)**	involute					1
		revolute					2
40		**Ray floret: degree of rolling of margin**					
QN	**(d)**	weak					3
		medium					5
		strong					7
41 (*)	**(d)**	**Ray floret: position of rolled part**					
PQ		basal quarter					1
		basal half					2
		basal three quarters					3
		distal three quarters					4
		distal half					5
		distal quarter					6
		throughout					7
42. (*) (+)		**Ray floret: longitudinal axis**					
PQ	**(d)**	incurving					1
		straight					2
		reflexing					3
		twisted					4

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
43.		**<u>Excluding straight ray florets:</u> ray floret: proportion of axis not straight**					
QN	**(d)**	distal quarter					3
		distal half					5
		distal three quarters					7
44.		**<u>Excluding straight florets</u>: ray floret: strength of curvature**					
QN	**(d)**	weak					3
		medium					5
		strong					7
45. (*)		**Ray floret: shape of apex**					
PQ	**(d)**	pointed					1
		rounded					2
		retuse					3
		dentate					4
		fringed					5
		laciniate					6
		horned					7
46. (*)	**(d)**	**Ray floret: number of colours of the inner side**					
PQ		one					1
		two					2
		more than two					3

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
47	**(d)**	**Single coloured ray florets: colour distribution**					
QN		lighter towards the base					3
		even					5
		lighter towards the apex					7
48. **(*)** **(+)**	**(d)** **(e)**	**Ray floret with more than one colour: distribution of secondary colour**					
PQ		at tip					1
		distal 1/4					2
		distal 1/2					3
		basal 1/4					4
		at base					5
		on margin					6
		on marginal zone					7
		central lengthways zone					8
		widthways zone [band]					9
		throughout					10

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
49. **(*)** **(+)**	**(d)** **(e)**	**Ray floret with more than one colour: pattern of secondary colour**					
PQ		solid or nearly so					1
		flushed					2
		diffuse stripes					3
		clearly defined stripes					4
		flecked					5
		flecked and striped					6
		mottled					7
50 **(+)**	**(d)** **(e)**	**Ray floret with more than two colours: pattern of tertiary colour**					
PQ		solid or nearly so					1
		flushed					2
		diffuse stripes					3
		clearly defined stripes					4
		flecked					5
		flecked and striped					6
		mottled					7

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
51. **(*)**	**(d)** **(e)**	**Ray floret: main colour of the inner side by group**					
PQ		white					1
		off-white					2
		yellow					3
		bronze					4
		orange					5
		orange-red					6
		salmon					7
		pink					8
		red					9
		red-purple					10
		purple					11
52. **(*)**	**(d)** **(e)**	**Ray floret: main colour of the inner side**					
		RHS chart					

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
53. **(*)**	**(d)** **(e)**	**<u>Ray floret with more than one colour</u>: secondary colour of the inner side by group**					
PQ		white					1
		off-white					2
		yellow					3
		bronze					4
		orange					5
		orange-red					6
		salmon					7
		pink					8
		red					9
		red-purple					10
		purple					11
54	**(d)** **(e)**	**Ray floret: secondary color of the inner side**					
		RHS chart					
55	**(d)** **(e)**	**Ray floret: tertiary color of the inner side**					
		RHS chart					
56. **(*)**	**(d)**	**Ray floret: color of the outer side**					
PQ		similar to inner side					1
		markedly different					2

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
57	**(d)**	**Ray floret: color of the outer side, where markedly different to inner side** RHS Chart					
58.		**Single, semi-double, anemone and collerette varieties only: Disc: diameter**					
QN		small					3
		medium					5
		large					7
59.		**Single, semi-double, anemone and collerette varieties only: Disc: diameter relative to flower head diameter**					
QN		small					3
		medium					5
		large					7
60.		**Single, semi-double and collerette varieties only: Disc: color before anther dehiscence**					
PQ		whitish					1
		green					2
		yellow-green					3
		yellow					4
		orange					5
		brown					6
		brown-black					7

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
61.	**<u>Single, semi-double and collerette varieties only</u>: Disc: color at anther dehiscence**					
PQ	whitish					1
	green					2
	yellow-green					3
	yellow					4
	orange					5
	brown					6
	brown-black					7
62.	**<u>Anemone flowered varieties only</u>: Disc florets: color**					
PQ	RHS Colour Chart (indicate reference number)					
63.	**<u>Collerette varieties only</u>: Collar segments: color**					
PQ	RHS Colour Chart (indicate reference number)					

8. Explanations on the Table of Characteristics

Unless otherwise indicated, all characteristics should be examined at the time of full flowering.

8.1 Explanations covering several characteristics

Characteristics containing the following key in the second column of the Table of Characteristics should be examined as indicated below:

(a) Stem characteristics should be observed on the middle third of the stem (the stem excludes the peduncle).

(b) Leaf characters are recorded on typical leaves taken from the middle third of the stem, and are recorded on the whole leaf regardless of the number of leaflets, looking at the upper surface.

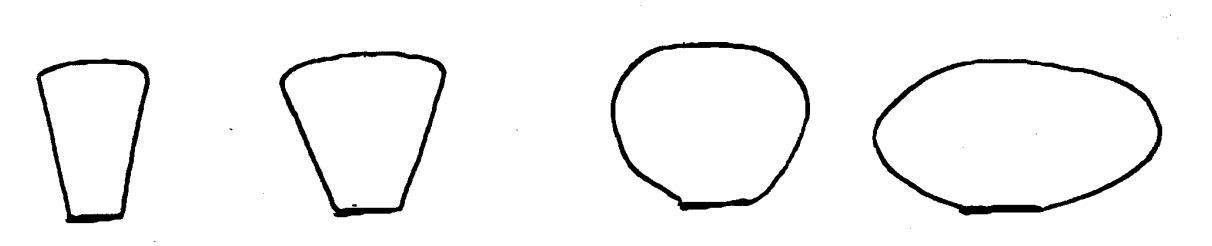
(c) Ray floret length and width characters should be observed on the outermost row of ray florets.

(d) In all but single flowered varieties, all other ray floret characters should be observed on the most typical florets, excluding the innermost and outermost rows, unless otherwise stated.

(e) The main color of the ray floret is the one which contributes most to the overall appearance of the flower head as seen from a slight distance. This means that, in the individual ray floret, the secondary color can occupy a greater area than the main color.

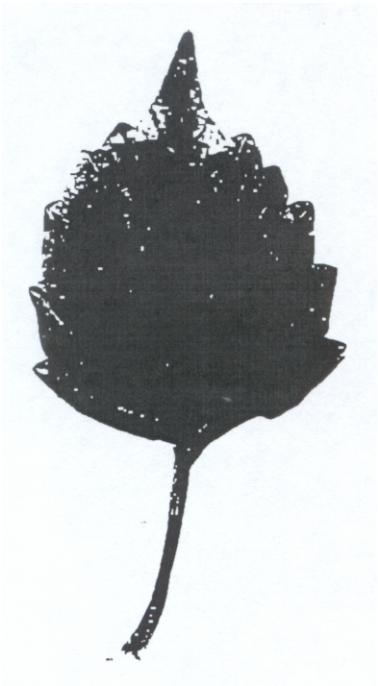
8.2 Explanations for individual characteristics]

Ad. 1: Plant: growth habit

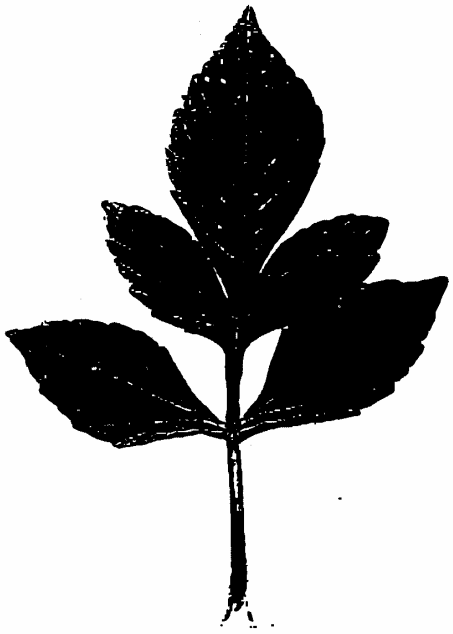


1	2	3	4
upright	semi-upright	rounded	spreading

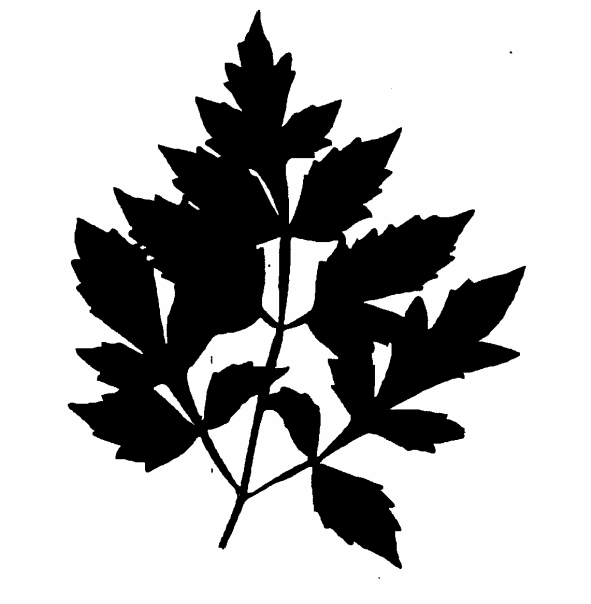
Ad. 4: Leaf: predominant type



1
simple

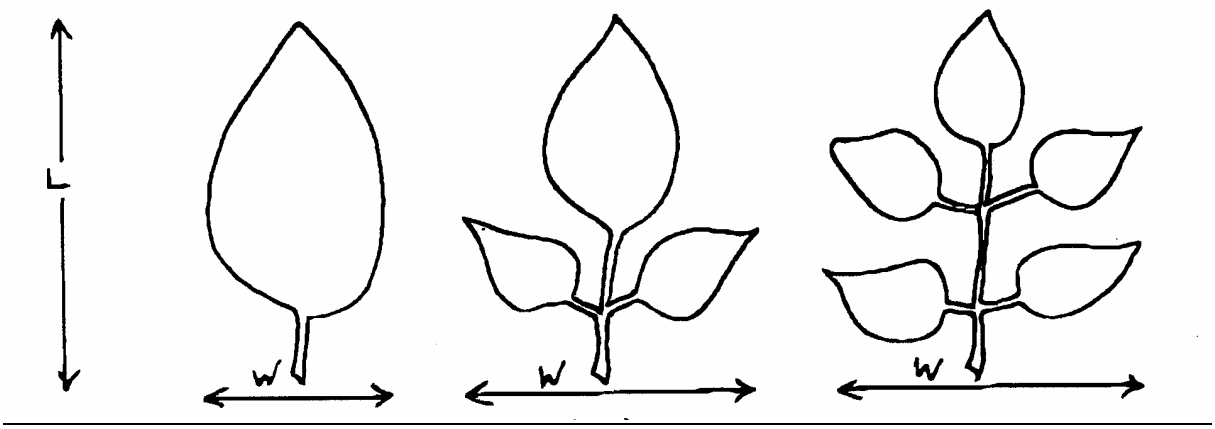


2
pinnate



3
bipinnate

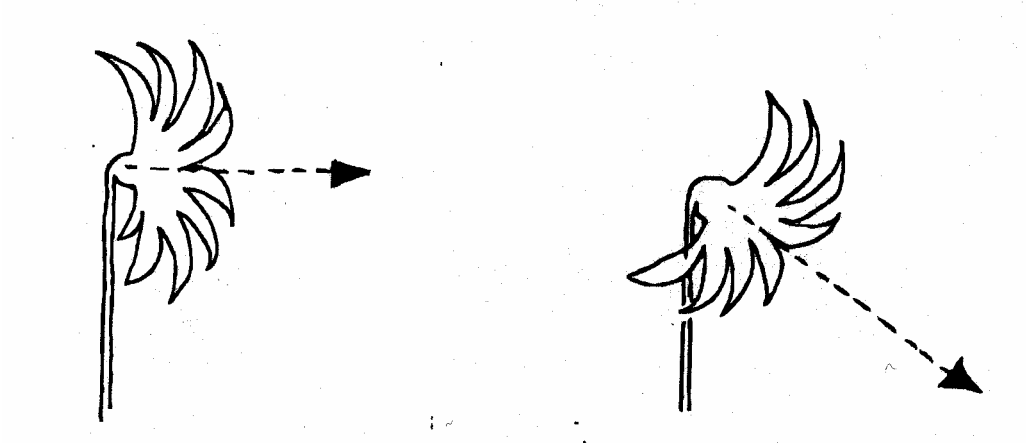
Ad 6 and 7: Leaf length and width



Ad 24: Flower head: attitude

1
upright

3
semi-erect



5
horizontal

7
nodding

Ad. 25: Flower head: type

1. single: flower heads with one row of ray florets, and a clearly defined central disc which is always visible.

2. semi-double: flower heads with more than one row of ray florets, and a clearly defined central disc which is always visible.

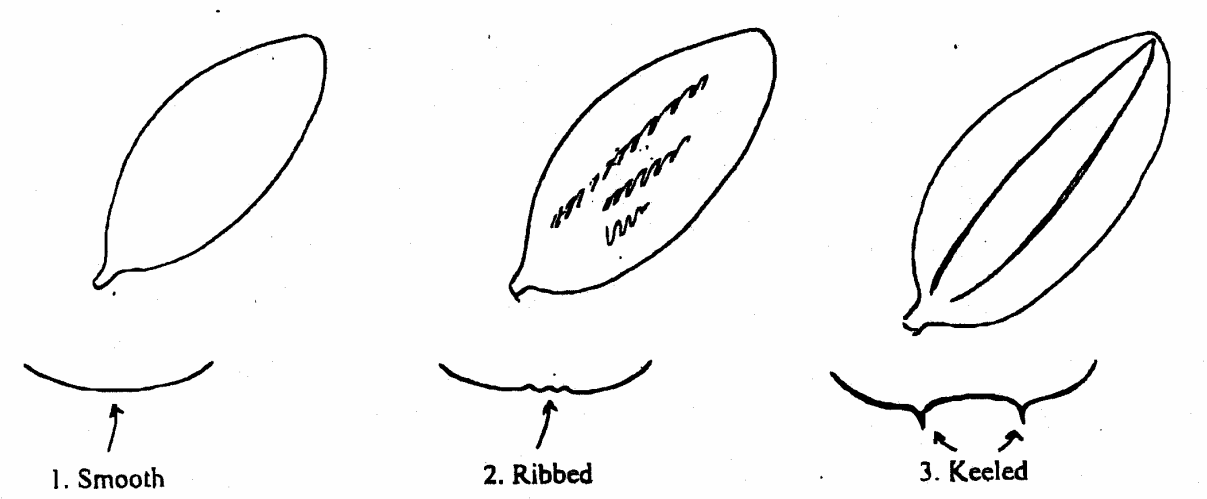
3. anemone: flower heads with one or more rows of ray florets, with a central "cushion" of petaloid disc florets, which is always visible.

4. collerette: flower heads with one row of ray florets, with a ring of small florets (the Collar) surrounding the central disc, which is always visible.

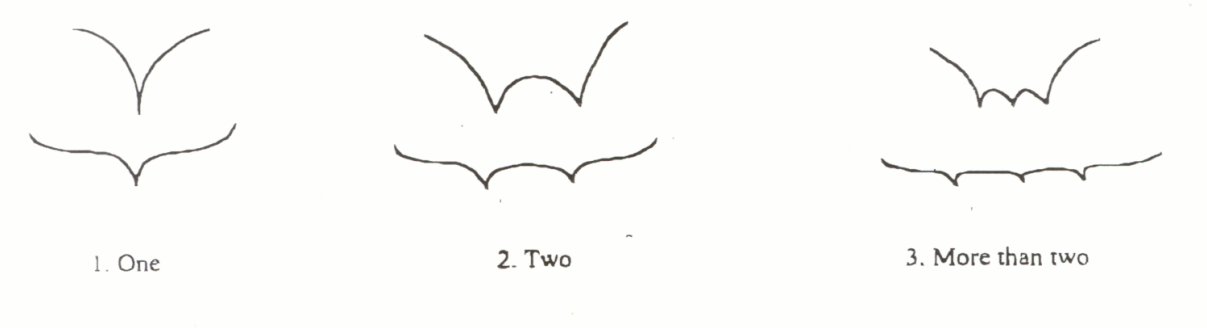
5. daisy-eyed double: double flower heads where a disc is not visible in the early stages of flowering, but can be seen as the flower head opens fully. The disc is not always clearly defined.

6. double: double flower heads where a disc is not visible at any stage of flowering.

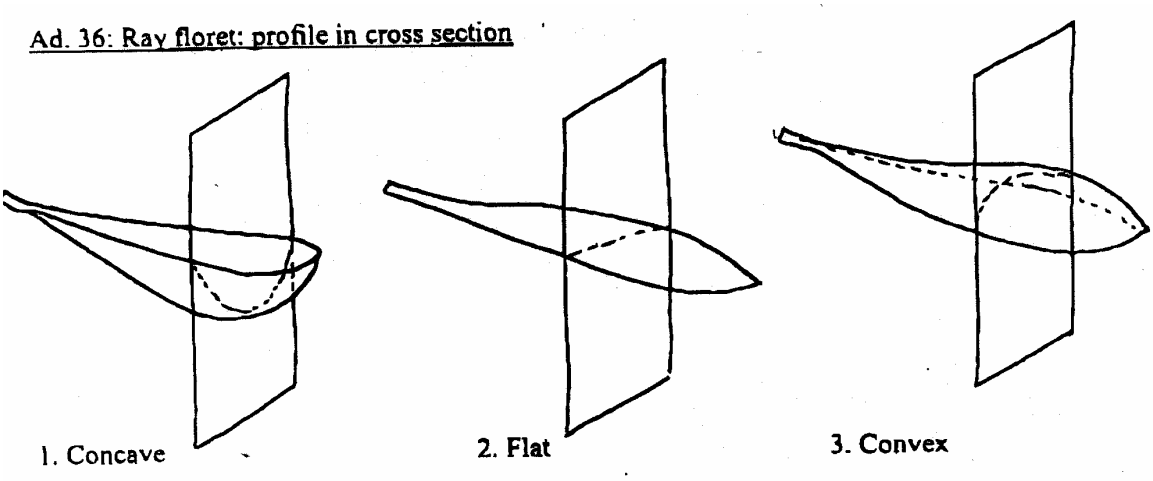
Ad. 34: Ray floret:surface



Ad. 35: Ray floret: number of keels



Ad. 36: Ray floret: profile in cross section

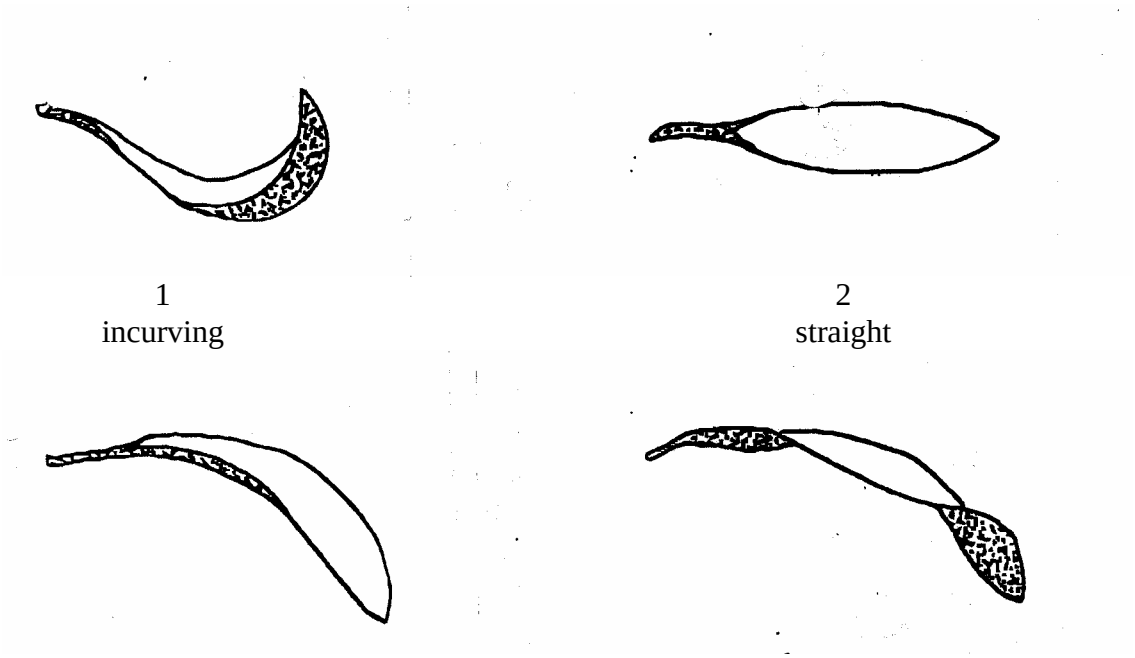


Ad. 39: Ray floret: profile type of rolling of the margin

1
involute

2
revolute

Ad. 42: Ray floret: longitudinal axis



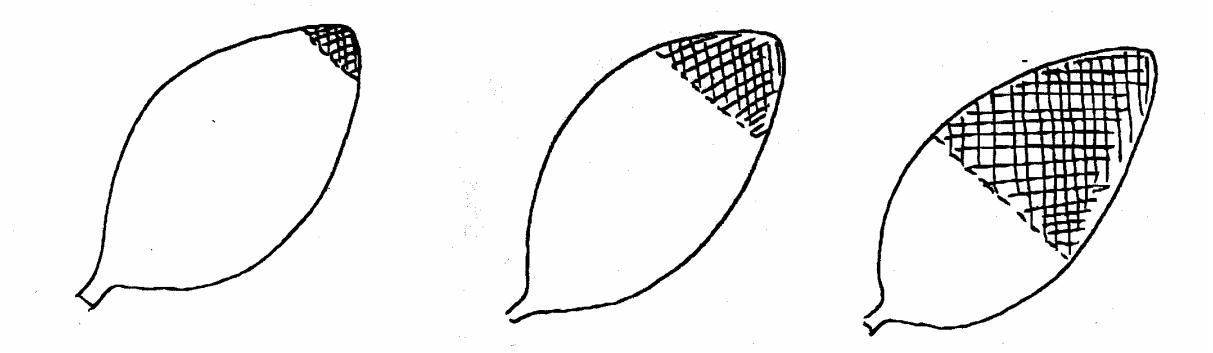
1
incurving

2
straight

3
reflexing

4
twisted

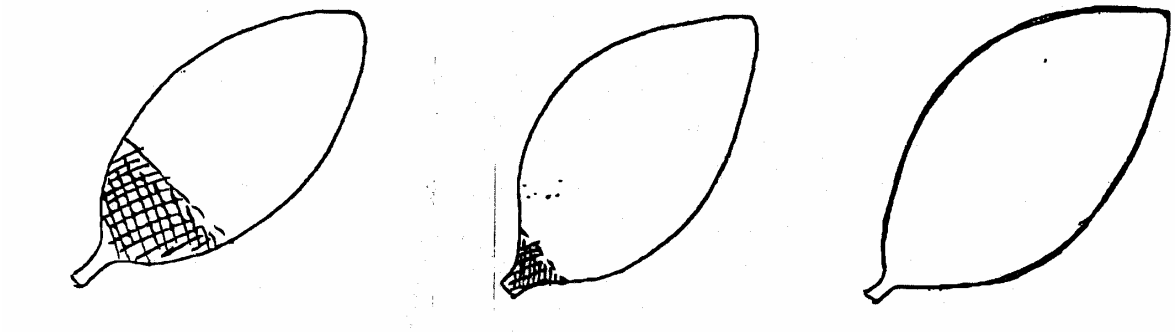
Ad. 48: Ray floret: with more than one color: distribution of secondary color



1
at tip

2
distal ¼

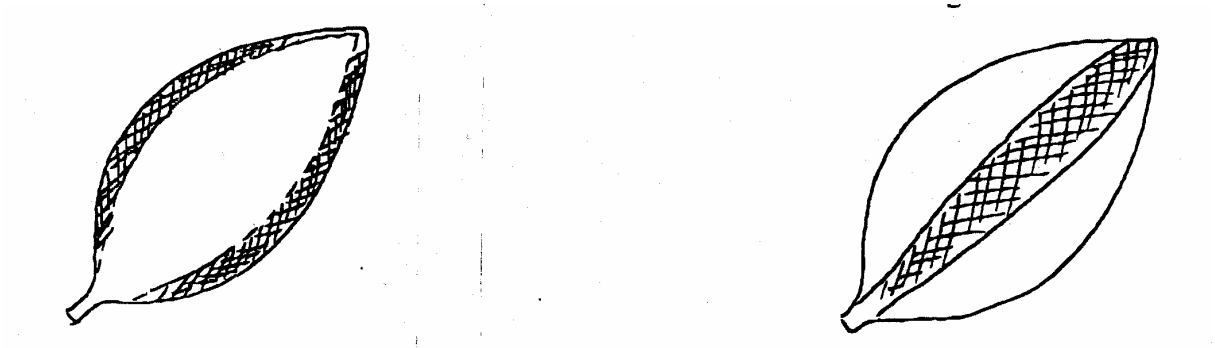
3
distal 1/2



4
basal 1/4

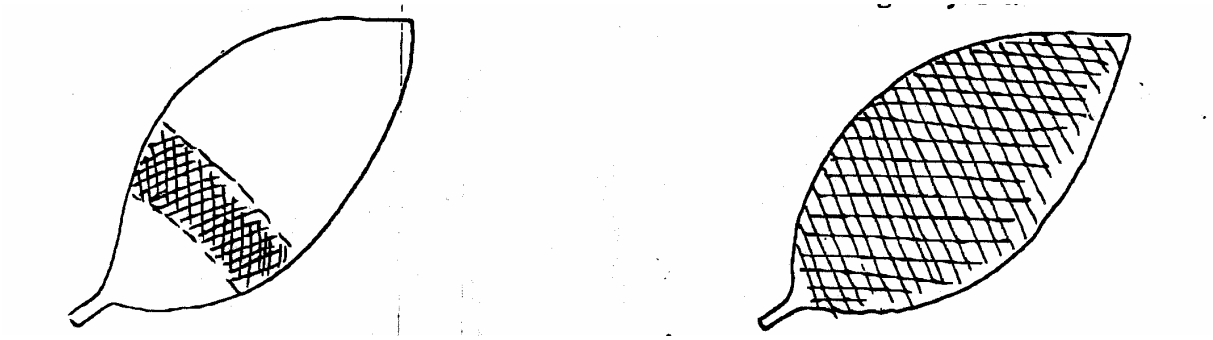
5
base

6
on margin



7
marginal zone

8
central lengthways zone

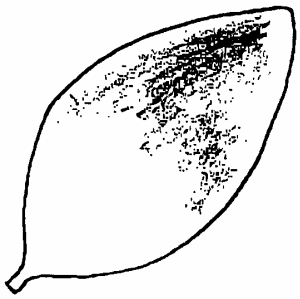


9
widthways zone [band]

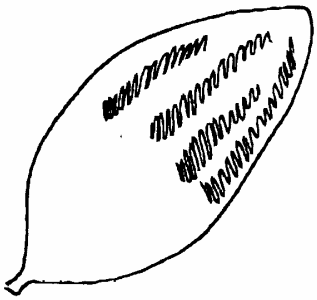
10
throughout

Ad. 49: Ray floret: with more than one color: pattern of secondary color

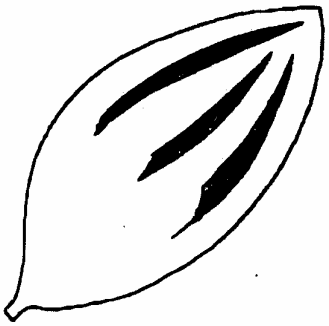
1
solid or nearly so



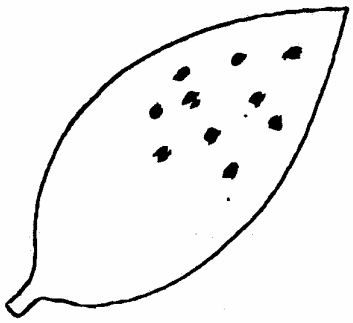
2
flushed



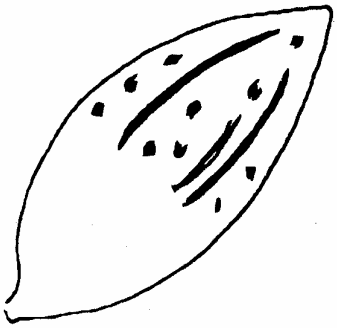
3
diffuse stripes



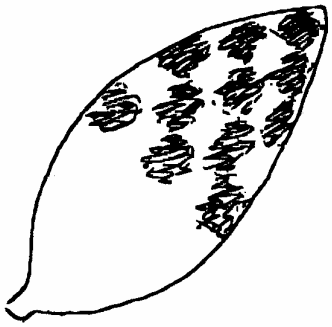
4
clearly defined stripes



5
flecked



6
flecked and striped



7
mottled

9. Literature

- Collins, Ted, 2001: "The New Plant Library - Dahlias", Anness Publishing Ltd, London, UK

- Collins, Ted, 2003: "Dahlias - A Colour Guide", The Crowood Press Ltd, Marlborough, UK

- Rowlands, Gareth, 1999: "The Gardeners Guide to Growing Dahlias", David and Charles Publishers, Devon, UK

- The Royal Horticultural Society 1992: "The New RHS Dictionary Index of Gardening", Macmillan Press, London, UK

- The Royal Horticultural Society, 1994: "The New RHS Dictionary Index of Garden Plants", Macmillan Press, London, UK

- The Royal Horticultural Society, 1998: "A-Z Encyclopedia of Garden Plants", Dorling Kindersley, London, UK

10. Technical Questionnaire

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

	Application date: (not to be filled in by the applicant)

TECHNICAL QUESTIONNAIRE
to be completed in connection with an application for plant breeders' rights

1. Subject of the Technical Questionnaire

1.1 Botanical name	*Dahlia* Cav.
1.2 Common name	Dahlia

2. Applicant

Name	
Address	
Telephone No.	
Fax No.	
E-mail address	
Breeder (if different from applicant)	

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

3. Proposed denomination and breeder's reference

Proposed denomination (if available) [ ]

Breeder's reference [ ]

[#]4. Information on the breeding scheme and propagation of the variety

4.1 Breeding scheme

Variety resulting from:

4.1.1 Crossing

(a) controlled cross [ ]
(please state parent varieties)
(b) partially known cross [ ]
(please state known parent variety(ies))
(c) totally unknown cross [ ]

4.1.2 Mutation [ ]
(please state parent variety)

4.1.3 Discovery [ ]
(please state where, when and how developed)

4.1.4 Other [ ]
(please provide details)]

4.2 Method of propagating the variety

i) vegetative propagation

(a) cuttings [ ]
(b) tubers [ ]
(c) in vitro [ ]
(d) other [indicate]..... [ ]

ii) seed propagation [indicate details]..... [ ]

[#] Authorities may allow certain of this information to be provided in a confidential section of the Technical Questionnaire.

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

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

	Characteristics	Example Varieties	Note
5.1 (2)	**Plant: height**		
	short		3 [ ]
	medium		5 [ ]
	tall		7 [ ]
5.2 (9)	**Leaf: color**		
	light green		1 [ ]
	medium green		2 [ ]
	dark green		3 [ ]
	green tinged with purple		4 [ ]
	green tinged with bronze		5 [ ]
	bronze		6 [ ]
	purple		7 [ ]
5.3 (25)	**Flower head: type**		
	single		1 [ ]
	semi-double		2 [ ]
	anemone		3 [ ]
	collerette		4 [ ]
	daisy-eyed double		5 [ ]
	double		6 [ ]

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

5.4	**<u>Varieties with double flower heads only</u>: flower head: classification group**	
	waterlily	1 [ ]
	decorative	2 [ ]
	ball	3 [ ]
	pompon	4 [ ]
	cactus	5 [ ]
	semi-cactus	6 [ ]
	other [indicate].....	7 [ ]
5.6 **(26)**	**Flower head: diameter**	
	small	3 [ ]
	medium	5 [ ]
	large	7 [ ]
5.7 **(46)**	**Ray floret: number of colours of the inner side**	
	one	1 [ ]
	two	2 [ ]
	more than two	3 [ ]

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

5.8 (51)	**Ray floret: main colour of the inner side by group**	
	white	1 [ ]
	off white	2 [ ]
	yellow	3 [ ]
	bronze	4 [ ]
	orange	5 [ ]
	orange-red	6 [ ]
	salmon	7 [ ]
	pink	8 [ ]
	red	9 [ ]
	red-purple	10 [ ]
	purple	11 [ ]
5.9 (53)	**Ray floret: secondary colour of the inner side by group**	
	white	1 [ ]
	off white	2 [ ]
	yellow	3 [ ]
	bronze	4 [ ]
	orange	5 [ ]
	orange-red	6 [ ]
	salmon	7 [ ]
	pink	8 [ ]
	red	9 [ ]
	red-purple	10 [ ]
	purple	11 [ ]

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

6. Similar varieties and differences from these varieties

Please use the table, and space provided for comments, below to provide information on how your candidate variety differs from the variety (or varieties) which, to the best of your knowledge, is (or are) most similar. This information may help the examination authority to conduct its examination of distinctness in a more efficient way.

Denomination(s) of variety(ies) similar to your candidate variety	Characteristic(s) in which your candidate variety differs from the similar variety(ies)	Describe the expression of the characteristic(s) for the **similar** variety(ies)	Describe the expression of the characteristic(s) for **your** candidate variety
Example	*Flower head diameter*	*small*	*medium*

Comments:

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

[#]7. Additional information which may help in the examination of the variety

7.1 In addition to the information provided in Sections 5 and 6, are there any additional characteristics which may help to distinguish the variety?

Yes [ ] No [ ]

(If yes, please provide details)

7.2 Special conditions for the examination of the variety

7.2.1 Are there any special conditions for growing the variety or conducting the examination?

Yes [ ] No [ ]

7.2.2 If yes, please give details:

7.3 Other information

Use of the variety

Pot plant	[ ]
Garden plant	[ ]
Cut flower	[ ]
Other [indicate]	[ ]

A representative color photograph of the variety should accompany 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 (b) is yes, please attach a copy of the authorization.

[#] Authorities may allow certain of this information to be provided in a confidential section of the Technical Questionnaire.

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

9. Information on plant material to be examined.

9.1 The expression of a characteristic or several characteristics of a variety may be affected by factors, such as pests and disease, chemical treatment (e.g. growth retardants or pesticides), effects of tissue culture, different rootstocks, scions taken from different growth phases of a tree, etc.

9.2 The plant material should not have undergone any treatment which would affect the expression of the characteristics of the variety, unless the competent authorities allow or request such treatment. If the plant material has undergone such treatment, full details of the treatment must be given. In this respect, please indicate below, to the best of your knowledge, if the plant material to be examined has been subjected to:

(a) Microorganisms (e.g. virus, bacteria, phytoplasma) Yes [ ] No [ ]

(b) Chemical treatment (e.g. growth retardant or pesticide) Yes [ ] No [ ]

(c) Tissue culture Yes [ ] No [ ]

(d) Other factors Yes [ ] No [ ]

Please provide details of where you have indicated “yes”.

……

10. I hereby declare that, to the best of my knowledge, the information provided in this form is correct:

Applicant’s name

Signature Date

[End of document]