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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

GENEVA

DRAFT

CAMELLIA

UPOV Code: CMLIA

Camellia L.excluding *Camellia sinensis* L. O.Kuntze

GUIDELINES

FOR THE CONDUCT OF TESTS

FOR DISTINCTNESS, UNIFORMITY AND STABILITY

*prepared by experts from China**to be considered by the**Technical Working Party for Ornamental Plants and Forest Trees
at its forty-third session, to be held in Cuernavaca, Morelos State, Mexico,
from September 20 to 24, 2010*

Alternative Names:*

<i>Botanical name</i>	<i>English</i>	<i>French</i>	<i>German</i>	<i>Spanish</i>
<i>Camellia</i> L.	Camellia	Camélia	Kamelie	Camelia

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 Test Guidelines should be read in conjunction with the General Introduction and its associated TGP documents.

Other associated UPOV documents: TG/TEA (*Camellia sinensis* L. O. Kuntze).

* 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.]

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1. Subject of these Test Guidelines

These Test Guidelines apply to all varieties of *Camellia* L. excluding *Camellia sinensis* (L.) O. Kuntze.

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 plants capable of flowering and expressing all relevant characteristics of the variety during the first or later growing cycle.

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

10 plants

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 *Number of Growing Cycles*

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

3.2 *Testing Place*

Tests are normally conducted at one place. In the case of tests conducted at more than one place, guidance is provided in TGP/9 "Examining Distinctness".

3.3 *Conditions for Conducting the Examination*

3.3.1 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.

3.3.2 Observations should be made on plants which are at least one year after being planted. The growing media, fertilization and soil moisture for growing tested plants should be treated uniformly.

3.3.3 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. The color chart and version used should be specified in the variety description.

3.4 *Test Design*

3.4.1 Each test should be designed to result in a total of at least 10 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 *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 differences observed between varieties may be so clear that more than one growing cycle is not necessary. In addition, in some circumstances, the influence of the environment is not such that more than a single growing cycle is required to provide assurance that the differences observed between varieties are sufficiently consistent. One means of ensuring that a difference in a characteristic, observed in a growing trial, is sufficiently consistent is to examine the characteristic in at least two independent growing cycles.

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.

4.1.4 Number of Plants / Parts of Plants to be Examined

Unless otherwise indicated, all observations for the purposes of distinctness should be made on 10 plants or parts taken from each of 10 plants, disregarding any off-type plants.

4.1.5 Method of Observation

The recommended method of observing the characteristic for the purposes of distinctness is indicated by the following key in the second column of the Table of Characteristics (see document TGP/9 “Examining Distinctness”, Section 4 “Observation of characteristics”):

MG: single measurement of a group of plants or parts of plants

MS: measurement of a number of individual plants or parts of plants

VG: visual assessment by a single observation of a group of plants or parts of plants

VS: visual assessment by observation of individual plants or parts of plants

Type of observation: visual (V) or measurement (M)

“Visual” observation (V) is an observation made on the basis of the expert’s judgment. For the purposes of this document, “visual” observation refers to the sensory observations of the experts and, therefore, also includes smell, taste and touch. Visual observation includes observations where the expert uses reference points (e.g. diagrams, example varieties, side-by-side comparison) or non-linear charts (e.g. color charts). Measurement (M) is an objective observation against a calibrated, linear scale e.g. using a ruler, weighing scales, colorimeter, dates, counts, etc.

Type of record: for a group of plants (G) or for single, individual plants (S)

For the purposes of distinctness, observations may be recorded as a single record for a group of plants or parts of plants (G), or may be recorded as records for a number of single, individual plants or parts of plants (S). In most cases, “G” provides a single record per variety and it is not possible or necessary to apply statistical methods in a plant-by-plant analysis for the assessment of distinctness.”

In cases where more than one method of observing the characteristic is indicated in the Table of Characteristics (e.g. VG/MG), guidance on selecting an appropriate method is provided in document TGP/9, Section 4.2.

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, 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, 1 off-type is allowed.

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 further examined by testing a new plant stock to ensure that it exhibits the same characteristics as those shown by the initial 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 are 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) Plant: plant type (characteristic 1)
- (b) Plant: growth habit (characteristic 2)
- (c) Leaf blade: length (characteristic 10)
- (d) Flower: type (characteristic 32)
- (e) Petal: main color (characteristic 43), with the following groups:
 - Gr.1: white
 - Gr.2: yellow
 - Gr.3: orange
 - Gr.4: pink
 - Gr.5: red
 - Gr.6: purple
- (f) Time of flowering (characteristic 54)

5.4 Guidance for the use of grouping characteristics, in the process of examining distinctness, is provided through the General Introduction and document TGP/9 “Examining Distinctness”.

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*

6.2.1 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.

6.2.2 In the case of qualitative and pseudo-qualitative characteristics (see Chapter 6.3), all relevant states of expression are presented in the characteristic. However, in the case of quantitative characteristics with 5 or more states, an abbreviated scale may be used to minimize the size of the Table of Characteristics. For example, in the case of a quantitative characteristic with 9 states, the presentation of states of expression in the Test Guidelines may be abbreviated as follows:

State	Note
small	3
medium	5
large	7

However, it should be noted that all of the following 9 states of expression exist to describe varieties and should be used as appropriate:

State	Note
very small	1
very small to small	2
small	3
small to medium	4
medium	5
medium to large	6
large	7
large to very large	8
very large	9

6.2.3 Further explanation of the presentation of states of expression and notes is provided in document TGP/7 "Development of Test Guidelines".

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*

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

6.4.2 Example varieties contained in the Table of Characteristics originally belong to following parent species:

Camellia changii (*Camellia azalea*): Chun Jiang Zi Xia

Camellia japonica: Anticipation, Betty Foy Sanders, Camilla Hebert, Chang E Cai, Colettii, Da Hong Jin Xin, Da Hong Mu Dan, Da Zhu Sha, Elegans Champagne, Fen Fu Rong, Fen Xia, Grape Soda, Hakuhan Kujaku, Helen Bower, Holly Bright, Hong Lu Zhen, Hua Bao Zhu, Hua Mu Dan, Jin Jiang Mu Dan, Jin Pan Li Zhi, Kingyotsubaki, Lipstick, L.T. Dees, Margaret Davis, Mary Agnes Patin, Masterpiece, Night Rider, Nokogiriba, Nuccio's # 4310, Nuccio's Bella Rossa, Nuccio's Cameo, Pen Sha, Pu Tao Hong, Raspberry Ice, Ren Mian Tao Hua, Royal Velvet, Sai Luo Yang, Shi Ba Xue Shi, Shi Zi Xiao, Swan Lake, Unryu-tsubaki, Wen Ban Fei Ye Cha, Xiao Tao Hong, Xue Ta, Zao Chun Da Hong Qiu, Zhuang Yuan Hong

Camellia reticulata: Bill Goertz, Da Li Cha, Da Tao Hong, Hou Ye De Chi, Masee Lane, Pink Dahlia, Tong Zi Mian, Zhu Sha Zi Pao

Camellia sasanqua: First Cover, Xia Mei Gui

6.5 *Legend*

(*) Asterisked characteristic – see Chapter 6.1.2

QL Qualitative characteristic – see Chapter 6.3

QN Quantitative characteristic – see Chapter 6.3

PQ Pseudo-qualitative characteristic – see Chapter 6.3

MG, MS, VG, VS – see Chapter 4.1.5

(a)-(g) See Explanations on the Table of Characteristics in Chapter 8.1

(+) See Explanations on the Table of Characteristics in Chapter 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. VG Plant: plant type						
(+)						
PQ	groundcover				First Cover	1
	shrub				Xiao Mei Gui	2
	semi-arbor				Hong Lu Zhen	3
	arbor				Da Li Cha	4
2. VG Plant: growth habit	Plante: port	Pflanze: Wuchsform	Planta: porte			
(*)						
(+)						
PQ	upright	dressé	Aufrecht	erecto	Anticipation	1
	semi-upright	demi-dressé	Halbaufrecht	semierecto	Mary Agnes Patin	2
	spreading				Masterpiece	3
	drooping				Hakuhan Kujaku	4
	horizontal				First Cover	5
3. Branch:zigzagging						
QL	absent				Hong Lu Zhen	1
	present				Unryu-tsubaki	9
4. VG Plant: foliage density						
(*)						
QN	sparse				Da Tao Hong	3
	medium				Chang E Cai	5
	dense				Pu Tao Hong	7

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
5.	VG	Vegetative bud: color				
PQ	(a)	yellowish green				1
		green			Elegans Champagne	2
		purple green			Ren Mian Tao Hua	3
		light pink			Fen Fu Rong	4
		purple red			Nuccio's Bella Rossa	5
		dark red			Night Rider	6
6.	VG	Terminal vegetative bud: number				
(+)						
PQ	(a)	one				1
		two				2
		more than two				3
7.	VG	Young shoot: color				
PQ	(b)	yellowish green				1
		green				2
		pink				3
		yellowish brown				4
		reddish brown				5
8.	VG	Leaf: attitude				
(*)						
(+)						
QN	(c)	upwards			Nuccio's Cameo	1
		outwards			Shi Zi Xiao	2
		downwards				3

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota	
9.	VG	Leaf: arrangement					
	(+)						
PQ	(c)	alternate				1	
		decussate				2	
		spiral				3	
10.	VG/	Leaf blade: length					
	(*)	MG					
QN	(c)	very short				1	
		short			Xiao Mei Gui	3	
		medium			Hong Lu Zhen	5	
		long			Zhu Sha Zi Pao	7	
		very long				9	
11.	VG/	Leaf blade:width					
	MG						
QN	(c)	very narrow				1	
		narrow				3	
		medium				5	
		broad			Hong Lu Zhen	7	
		very broad				9	
12.	VG	Leaf blade:position					
	(*)	of broadest part					
	(+)						
QN	(c)	above the middle				1	
		middle third				2	
		below the middle				3	

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
13.	VG	Leaf blade: shape of base				
(*)						
(+)						
PQ	(c)	acute			Pink Dalhlia	1
		obtuse			Swan Lake	2
		rounded			Massee Lane	3
		auriculate				4
14.	VG	Leaf blade: shape of apex				
(*)						
(+)						
PQ	(c)	broad short acuminate				1
		narrow long acuminate				2
		rounded			Chun Jiang Zhi Xia	3
		divided			Kingyo-tsubaki	4
15.	VG	Leaf blade: length of acuminate tip				
QN	(c)	short				1
		medium				2
		long				3
16.	VG	Leaf blade: pubescence on upper side				
QL	(c)	absent				1
		present				9
17.	VG	Leaf blade: thickness				
(*)						
QN	(c)	thin			Xiao Mei Gui	1
		medium			Hong Lu Zhen	2
		thick			Hou Ye De Chi	3

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
18.	VG	Leaf blade: venation on upper side				
QN	(c)	very weak to weak			Shi Zi Xiao	1
		medium			Fen Xia	2
		strong to very strong				3
19.	VG	Leaf blade: glossiness of upper side				
QN	(c)	weak			Swan Lake	3
		medium			Da Zhu Sha	5
		strong			Royal Velvet	7
20.	VG	Leaf blade: variegation				
QL	(c)	absent				1
		present				9
21.	VG	Leaf blade: Color of upper side (excluding variegation)				
PQ	(c)	yellowish green			Nuccio's # 4310	1
		light green			Xiao Tao Hong	2
		medium green			Hong Lu Zhen	3
		dark green			Colettii	4
		grey green				5
22.	VG	Leaf blade: color of variegation				
PQ	(c)	white				1
		light yellow				2
		medium yellow				3

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
23.	VG	Leaf blade: distribution of variegation				
PQ	(c)	marginal only				1
		central zone only				2
		irregular				3
24.	VG	Leaf blade: shape in cross section				
	(+)					
QN	(c)	concave			Tong Zi Mian	1
		flat			Chang E Cai	2
		convex			Wen Ban Fei Ye Cha	3
25.	VS	Leaf blade: margin				
	(*)					
	(+)					
PQ	(c)	entire			Chun Jiang Zhi Xia	1
		serrulate			L.T. Dees	2
		serrate			Nokogiriba	3
		bidentate			Bill Goertz	4
26.	VG/ MS	Petiole: length				
QN	(c)	very short				1
		short			Hong Lu Zhen	3
		medium				5
		long				7
27.	VG	Sepal: shape				
	(+)					
	(d)	ovate				1
PQ		elliptic				2
		obovate				3

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota	
28.	VG	Sepal: color of outer side					
PQ	(d)	yellowish green			Xiao Tao Hong	1	
		yellow			Grape Soda	2	
		purple red				3	
		brown				4	
29.	VG	Sepal: shape of apex					
(+)	(d)						
QN		obtuse				1	
		rounded				2	
		retuse				3	
30.	VG	Flower bud: arrangement					
(+)							
		terminal only				1	
PQ		terminal and axillary				2	
		axillary only				3	
31.	MG/ VG	Flower: diameter					
(+)							
(*)							
QN	(e)	very small				1	
		small				3	
		medium				5	
		large				7	
		very large				9	

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
32.	VG	Flower: form				
	(*)					
	(+)					
PQ	single				Da Hong Jin Xin	1
	semi-double				Chun Jiang Zhi Xia	2
	anemone form				Jin Pan Li Zhi	3
	peony form				Hua Mu Dan	4
	rose form double				Zhuang Yuan Hong	5
	formal double				Xue Ta	6
33.	VG	Flower: petaloids				
	absent					1
QL	present					9
34.	MG/ VG	Flower: number of petaloids				
QN	few					1
	medium					5
	many					9
35.	VG	Flower: petaloids				
	(+)					
	partial stamens					1
PQ	total stamens					2
	total stamens and the pistil					3
36.	VG	Petal: thickness				
QN	(f) thin				Xiao Mei Gui	1
	medium				Xiao Tao Hong	2
	thick					3

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
37.	VG	Petal: shape of apex				
	(+)					
PQ	(f)	obtuse				1
		rounded				2
		retuse				3
38.	VG	Petal: number of incisions of margin				
QN	(f)	absent or few				1
		medium				2
		many				3
39.	VG	Petal: curvature of longitudinal axis				
	(+)					
QN	(f)	incurved				1
		flat				2
		reflexed				3
40.	VG	Flower: shape of petals of first outer row				
	(*)					
	(+)					
PQ	(f)	ovate			Helen Bower	1
		oblate				2
		circular			Swan Lake	3
		oblong				4
		obovate			Lipstick	5
		obcordate			Jin Pan Li Zhi	6
41.	VG	Petal: undulation of margin				
	(+)					
QN	(f)	absent or weak			Shi Ba Xue Shi	1
		medium			Raspberry Ice	2
		strong			Holly Bright	3

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota	
42.	VG	Petal: venation					
QN	(f)	weak					1
		medium					2
		strong					3
43.	VG	Petal: main color					
(*)							
PQ	(f)	RHS Colour Chart (indicate reference number)					
44.	VG	Petal: intensity of main color (excluding variegation)					
(*)							
PQ	(f)	entire					1
		darkest in the central zone					2
		darkest in the marginal zone					3
		darkest towards the base					4
45.	VG	Petal: distribution of main color					
PQ	(f)	entire					1
		upper third					2
		central third					3
		basal third					4
46.	(f)	Petal: secondary color					
(*)							
PQ		RHS Colour Chart (indicate reference number)					

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
47.	VG	Petal: distribution of secondary color				
(*)						
(+)						
PQ	(f)	entire			Betty Foy Sanders	1
		marginal			Margaret Davis	2
		central zone				3
		basal zone			Camilla Hebert	4
48.	VG	Petal: pattern of the secondary color				
(*)						
(+)						
	(f)	blotched			Pen Sha	1
		central bar			Hua Bao Zhu	2
		striated				3
		marginal				4
49.	VG	Stamens: arrangement				
(*)						
(+)						
PQ		sasanqua			Xia Mei Gui	1
		circular			Sai Luo Yang	2
		apricot				3
		tea whisk			Da Hong Jin Xin	4
		pinched				5
		tubular				6
		split			Jin Jiang Mu Dan	7
		dispersed			Da Hong Mu Dan	8

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota	
50.	VG	Style: number of splits					
QN	one					1	
	two					2	
	three					3	
	four					4	
	five					5	
51.	VG	Style: position of splitting					
(+)							
QN	low					1	
	medium					2	
	high					3	
52.	VG	Stigma: position in relation to stamens					
(+)							
QN	below					1	
	same level					2	
	above					3	
53.	VG	Ovary: hairs					
QL	absent					1	
	present					9	
54.	MG	Time of flowering					
(*)							
QN	early spring				Zao Chun Da Hong Qiu	1	
	late spring				Da Hong Jin Xin	3	
	summer				Chun Jiang Zhi Xia	5	
	autumn					7	
	winter					9	

8. Explanations on the Table of Characteristics

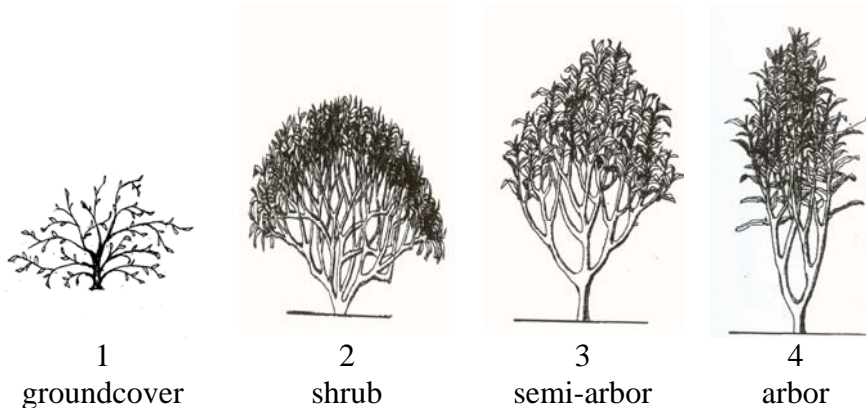
8.1 *Explanations covering several characteristics*

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

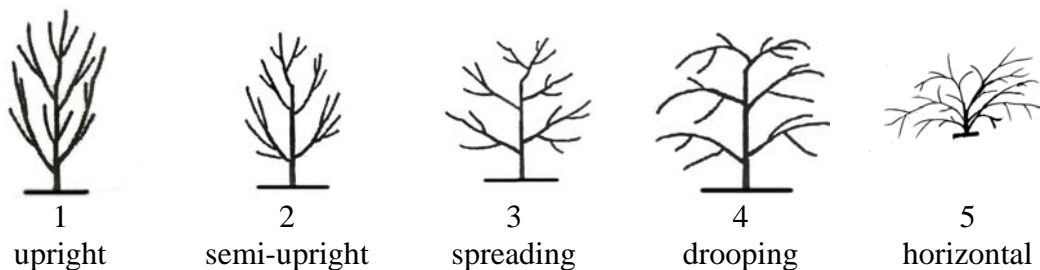
- (a) Observations should be made on buds just before they sprout in the spring.
- (b) Observations should be made on the first round developed young shoots.
- (c) Observations should be made on the matured leaves in the middle shoots in the summer or autumn season.
- (d) Observations should be made on the sepals just before blossoming.
- (e) Observations should be made on the fully open and regular flowers with average of 5 flowers.
- (f) Observations should be made on regular petals in first outer row in blossoming season.
- (g) Flower: diagram

8.2 *Explanations for individual characteristics*

Ad. 1: Plant: plant type



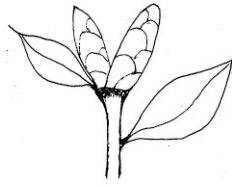
Ad. 2: Plant: growth habit



Ad. 6: Terminal vegetative bud: number



1
one



2
two

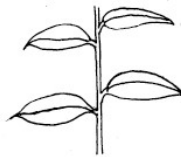


3
more than two

Ad. 8: Leaf: attitude



1
upwards



2
outwards



3
downwards

Ad. 9: Leaf: arrangement



1
alternate



2
decussate



3
spiral

Ad. 12: Leaf blade: position of broadest part



1

above the middle



2

middle third



3

below the middle

Ad. 13: Leaf blade: shape of base



1

acute



2

obtuse



3

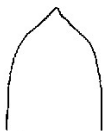
rounded



4

auriculate

Ad. 14: Leaf blade: shape of apex



1

broad short acuminate



2

narrow long
acuminate



3

retuse



4

divided

Ad. 24: Leaf blade: shape in cross section



1

concave



2

flat



3

convex

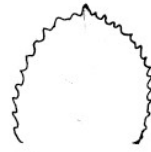
Ad. 25: Leaf blade: margin



1
entire



2
serrulate



3
serrate



4
bidentate

Ad. 27: Sepal: shape



1
ovate

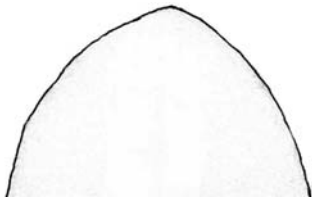


2
elliptic



3
obovate

Ad. 29: Sepal: shape of apex



1
obtuse

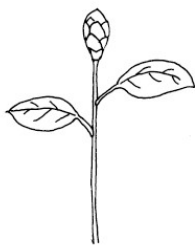


2
rounded



3
retuse

Ad. 30: Flower bud: arrangement



1
terminal only



2
terminal and axillary



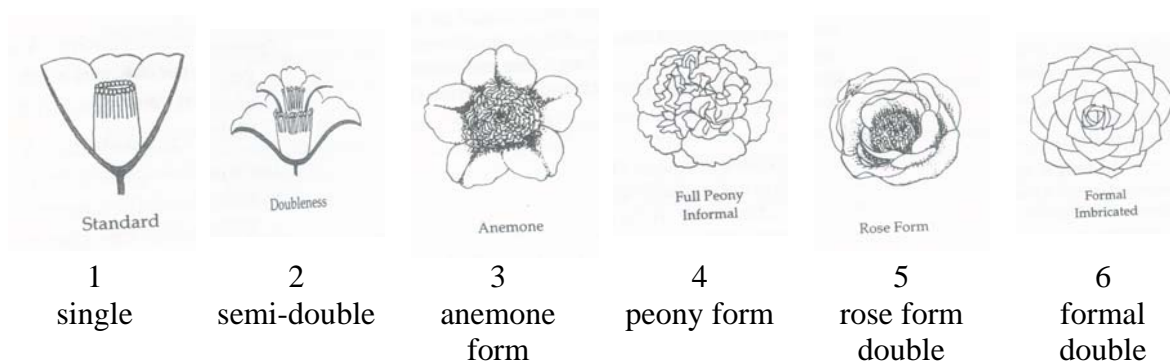
3
axillary only

Ad. 31: Flower: diameter

Although Camellia flowers from the one cultivar can be some variable in size and form, depending on its environment, particularly that of climate, situation, and cultivation, they have been classified into six types according to their diameter, for the purpose of exhibition, cultivation and to assist with description:

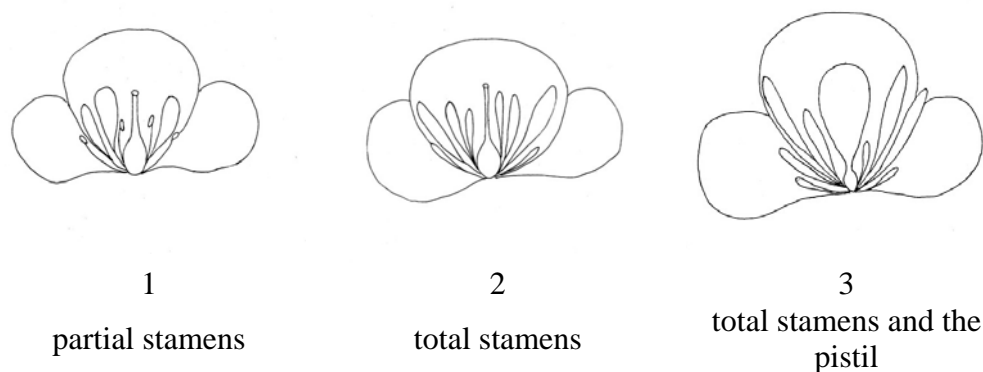
- Very small: 1 cm or less
- Small: 1 cm – 6 cm
- Medium: 7.5cm – 10 cm
- Large: 10 cm – 13 cm
- Very Large: over 13 cm

Ad. 32: Flower: form



1. The single is the typical wild camellia flower form with five to seven irregular, overlapping petals in a single row and a more or less columnar stamen cluster.
2. The semi-double has in excess of eight petals in two or more rows with a conspicuous stamen centre, with no petaloids. The Petals may be regular, irregular or loose.
3. The anemone form, has one or more outer rows of large petals while, in the centre, the stamens have become totally petaloid and form a convex mass in the centre of the flower.
4. The peony form has loose petals, usually irregular or wavy, becoming smaller to the centre, where they are divided into by fascicles of stamens; sometimes the centre is a mixture of small petals, petaloids and stamens; or is a convex mass of a mixture of irregular, twisted petals and petaloids, with the stamen, if any, obscured.
5. The rose form double has multiple rows of imbricated petals opening through a bud-shaped centre to show some stamens in a concave centre when fully open.
6. The formal double has many rows of regular, overlapping petals and has no stamens.

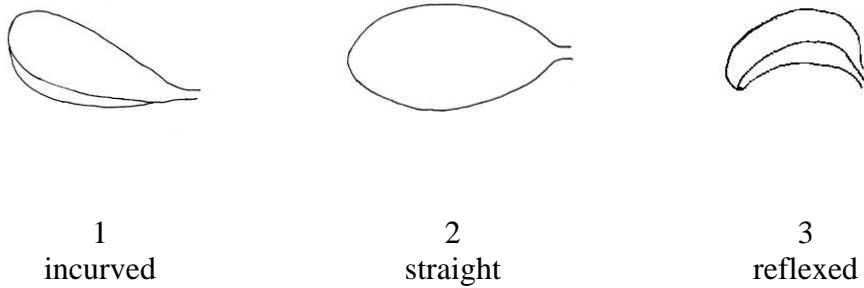
Ad. 35: Flower: petaloids



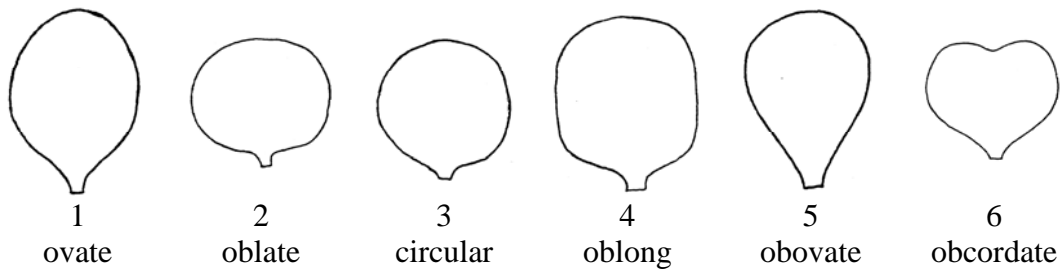
Ad. 37: Petal: shape of apex



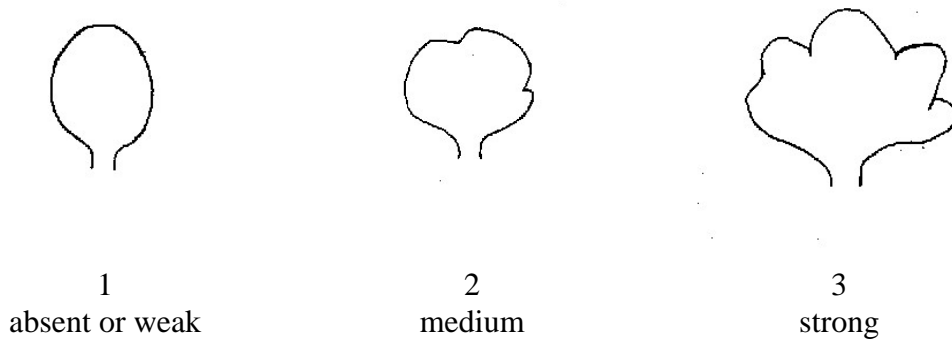
Ad. 39: Petal: curvature of longitudinal axis



Ad. 40: Flower: shape of petals of first outer row



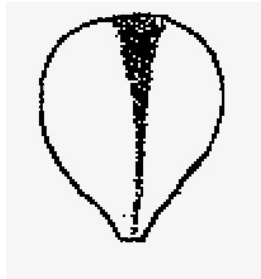
Ad. 41: Petal: undulation of margin



Ad. 48: Petal: pattern of the secondary color



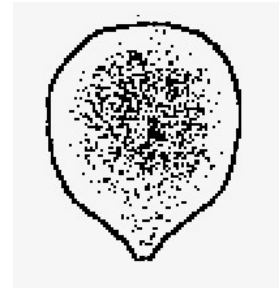
1
blotched



2
central bar



3
striated

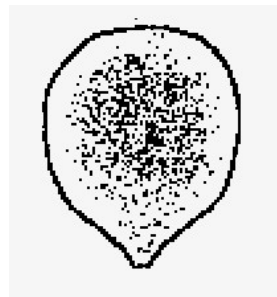


4
marginal

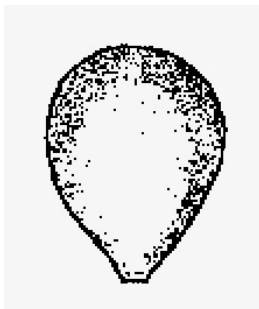
Ad. 48: Petal: distribution of secondary color



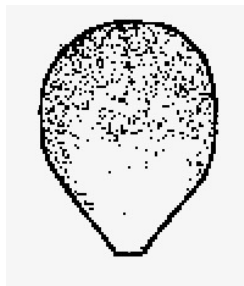
1
Entire



2
Marginal



3
central zone



4
basal zone

Ad. 49: Stamens: arrangements



1
sasanqua



2
circular



3
apricot



4
tea
whisk



5
pinched



6
tubular



7
split



8
dispersed

Ad. 51: Style: position of splitting



1
low

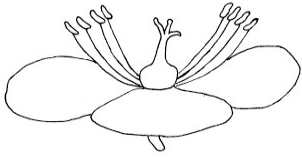


2
medium

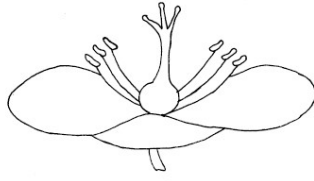


3
high

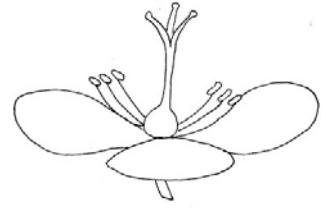
Ad. 52: Flower: position in relation to stamens



3
below



5
same level



7
above

9. Literature

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10. Technical Questionnaire

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:																																							
		Application date: (not to be filled in by the applicant)																																							
<p>TECHNICAL QUESTIONNAIRE to be completed in connection with an application for plant breeders' rights</p> <p>In the case of hybrid varieties which are the subject of an application for plant breeders' rights, and where the parent lines are to be submitted as a part of the examination of the hybrid variety, this Technical Questionnaire should be completed for each of the parent lines, in addition to being completed for the hybrid variety.</p>																																									
<p>1. Subject of the Technical Questionnaire</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%; padding: 5px;">1.1.1 Botanical name</td> <td style="width: 55%; padding: 5px;"><input style="width: 95%;" type="text" value="Camellia japonica"/></td> <td style="width: 20%;"></td> </tr> <tr> <td style="padding: 5px;">1.1.2 Common name</td> <td style="padding: 5px;"><input style="width: 95%;" type="text" value="Camellia"/></td> <td style="padding: 5px;">[]</td> </tr> <tr> <td style="padding: 5px;">1.2.1 Botanical name</td> <td style="padding: 5px;"><input style="width: 95%;" type="text" value="Camellia japonica"/></td> <td></td> </tr> <tr> <td style="padding: 5px;">1.2.2 Common name</td> <td style="padding: 5px;"><input style="width: 95%;" type="text" value="Camellia"/></td> <td style="padding: 5px;">[]</td> </tr> <tr> <td style="padding: 5px;">1.3.1 Botanical name</td> <td style="padding: 5px;"><input style="width: 95%;" type="text" value="Camellia reticulate"/></td> <td></td> </tr> <tr> <td style="padding: 5px;">1.3.2 Common name</td> <td style="padding: 5px;"><input style="width: 95%;" type="text" value="Yunnan Camellia"/></td> <td style="padding: 5px;">[]</td> </tr> <tr> <td style="padding: 5px;">1.4.1 Botanical name</td> <td style="padding: 5px;"><input style="width: 95%;" type="text" value="Camellia sasanqua"/></td> <td></td> </tr> <tr> <td style="padding: 5px;">1.4.2 Common name</td> <td style="padding: 5px;"><input style="width: 95%;" type="text" value="Sasanqua"/></td> <td style="padding: 5px;">[]</td> </tr> <tr> <td style="padding: 5px;">1.5.1 Botanical name</td> <td style="padding: 5px;"><input style="width: 95%;" type="text" value="Camellia lutchensis"/></td> <td></td> </tr> <tr> <td style="padding: 5px;">1.5.2 Common name</td> <td style="padding: 5px;"><input style="width: 95%;" type="text" value="Nujiang Camellia"/></td> <td style="padding: 5px;">[]</td> </tr> <tr> <td style="padding: 5px;">1.6.1 Botanical name</td> <td style="padding: 5px;"><input style="width: 95%;" type="text" value="C. (mother parent) x C. (father parent)"/></td> <td></td> </tr> <tr> <td style="padding: 5px;">1.6.2 Common name</td> <td style="padding: 5px;"><input style="width: 95%;" type="text" value="Camellia Hybrids"/></td> <td style="padding: 5px;">[]</td> </tr> <tr> <td style="padding: 5px;">1.7 other (please indicate)</td> <td style="padding: 5px;"><input style="width: 95%;" type="text"/></td> <td style="padding: 5px;">[]</td> </tr> </table>			1.1.1 Botanical name	<input style="width: 95%;" type="text" value="Camellia japonica"/>		1.1.2 Common name	<input style="width: 95%;" type="text" value="Camellia"/>	[]	1.2.1 Botanical name	<input style="width: 95%;" type="text" value="Camellia japonica"/>		1.2.2 Common name	<input style="width: 95%;" type="text" value="Camellia"/>	[]	1.3.1 Botanical name	<input style="width: 95%;" type="text" value="Camellia reticulate"/>		1.3.2 Common name	<input style="width: 95%;" type="text" value="Yunnan Camellia"/>	[]	1.4.1 Botanical name	<input style="width: 95%;" type="text" value="Camellia sasanqua"/>		1.4.2 Common name	<input style="width: 95%;" type="text" value="Sasanqua"/>	[]	1.5.1 Botanical name	<input style="width: 95%;" type="text" value="Camellia lutchensis"/>		1.5.2 Common name	<input style="width: 95%;" type="text" value="Nujiang Camellia"/>	[]	1.6.1 Botanical name	<input style="width: 95%;" type="text" value="C. (mother parent) x C. (father parent)"/>		1.6.2 Common name	<input style="width: 95%;" type="text" value="Camellia Hybrids"/>	[]	1.7 other (please indicate)	<input style="width: 95%;" type="text"/>	[]
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1.7 other (please indicate)	<input style="width: 95%;" type="text"/>	[]																																							

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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2. Applicant

Name

Address

Telephone No.

Fax No.

E-mail address

Breeder (if different from applicant)

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)

(.....)	x	(.....)
female parent		male parent

- (b) partially known cross []
 (please state known parent variety(ies))

(.....)	x	(.....)
female parent		male parent

- (c) unknown cross []

- 4.1.2 Mutation []
 (please state parent variety)

- 4.1.3 Discovery and development []
 (please state where and when discovered and how developed)

- 4.1.4 Other []
 (please provide details)

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

4.2 Method of propagating the variety

4.2.1 Vegetative propagation

- (a) cuttings
- (b) *in vitro* propagation
- (c) other (state method)

- 4.2.2 Other
(please provide details)

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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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 Plant: plant type (1)		
groundcover	First Cover	1[]
shrub	Xiao Mei Gui	2[]
semi-arbor	Hong Lu Zhen	3[]
arbor	Da Li Cha	4[]
5.2 Plant: growth habit (2)		
upright	Anticipation	1[]
semi-upright	Mary Agnes Patin	2[]
spreading	Masterpiece	3[]
drooping	Hakuhan Kujaku	4[]
horizontal	First Cover	5[]
5.3 Plant: foliage density (4)		
very sparse		1[]
very sparse to sparse		2[]
sparse	Da Tao Hong	3[]
sparse to medium		4[]
medium	Chang E Cai	5[]
medium to dense		6[]
dense	Pu Tao Hong	7[]
dense to very dense		8[]
very dense		9[]

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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5.4	Leaf: attitude	
(8)		
	upwards	Nuccio's Cameo 1[]
	outwards	Shi Zi Xiao 2[]
	downwards	<i>C.grijii</i> 3[]
5.5	Leaf blade: length	
(10)		
	very short	<i>C.cuspidata</i> 1[]
	very short to short	2[]
	short	Xiao Mei Gui 3[]
	short to medium	4[]
	medium	Hong Lu Zhen 5[]
	medium to long	6[]
	long	Zhu Sha Zi Pao 7[]
	long to very long	8[]
	very long	<i>C.amplexicaulis</i> 9[]
5.6	Leaf blade: margin	
(25)		
	entire	Chun Jiang Zhi Xia 1[]
	serrulate	L.T. Dees 2[]
	serrate	Nokogiriba 3[]
	bidentate	Bill Goertz 4[]

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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5.7 Flower: diameter		
(31)		
very small		1[]
very small to small		2[]
small		3[]
small to medium		4[]
medium		5[]
medium to large		6[]
large		7[]
large to very large		8[]
very large		9[]
5.8 Flower: form		
(32)		
single	Da Hong Jin Xin	1[]
semi-double	Chun Jiang Zhi Xia	2[]
anemone form	Jin Pan Li Zhi	3[]
peony form	Hua Mu Dan	4[]
rose form double	Zhuang Yuan Hong	5[]
formal double	Xue Ta	6[]
5.9 Flower: shape of petals of first outer row		
(40)		
ovate	Helen Bower	1[]
oblate		2[]
circular	Swan Lake	3[]
oblong		4[]
obovate	Lipstick	5[]
obcordate	Jin Pan Li Zhi	6[]

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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5.10 Petal: main color		
(43)		
white		1[]
yellow		2[]
orange		3[]
pink		4[]
red		5[]
purple		6[]
5.11 Petal: pattern of the secondary color		
(48)		
blotched	Betty Foy Sanders	1[]
central bar	Margaret Davis	2[]
striated		3[]
marginal	Camilla Hebert	4[]
5.12 Time of flowering		
(54)		
early spring	Zao Chun Da Hong Qiu	1[]
		2[]
late spring	Da Hong Jin Xin	3[]
		4[]
summer	Chun Jiang Zhi Xia	5[]
		6[]
autumn		7[]
		8[]
winter		9[]

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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6. Similar varieties and differences from these varieties

Please use the following table and box for comments 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
---	---	--	--

<i>Example</i>	{ GN 33 } (Chapter 10: TQ 6) – similar varieties }		
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Comments:

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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#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 Are there any special conditions for growing the variety or conducting the examination?

Yes [] No []

(If yes, please provide details)

7.3 Other information

A representative color image 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:
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9. Information on plant material to be examined or submitted for examination.

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, pesticide) | Yes [] | No [] |
| (c) Tissue culture | Yes [] | No [] |
| (d) Other factors | Yes [] | No [] |

Please provide details for where you have indicated "yes".

.....

9.3 Has the plant material to be examined been tested for the presence of virus or other pathogens?

- Yes []
(please provide details as specified by the Authority)
- No []

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]