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## INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

Geneva

DRAFT

**RASPBERRY; BLACK RASPBERRY**UPOV Code(s): RUBUS\_IDA;  
RUBUS\_OCC*Rubus idaeus* L.;  
*Rubus occidentalis* L.**GUIDELINES****FOR THE CONDUCT OF TESTS****FOR DISTINCTNESS, UNIFORMITY AND STABILITY***prepared by an expert from Germany**to be considered by**the Technical Committee at its fifty-ninth session  
to be held in Geneva on October 23 and 24, 2023**Disclaimer: this document does not represent UPOV policies or guidance*

Alternative names:\*

<i>Botanical name</i>	<i>English</i>	<i>French</i>	<i>German</i>	<i>Spanish</i>
<i>Rubus idaeus</i> L.	Raspberry	Framboisier	Himbeere	Frambueso, Sangüeso
<i>Rubus occidentalis</i> L., <i>Rubus occidentalis</i> L. var. <i>occidentalis</i>	Black Raspberry, Blackcap, Thimbleberry	Frambosier noir, Frambosier de Virginie	Schwarze Himbeere	Frambueso negro

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/73 (Blackberry)

\* 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](http://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 *Rubus idaeus* L. and *Rubus occidentalis* L. and their hybrids.

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 with a satisfactory number of adventitious buds on the roots.
- 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*

- 3.1.1 The minimum duration of tests should normally be two independent growing cycles.
- 3.1.2 The two independent growing cycles may be observed from a single planting, examined in two separate growing cycles.
- 3.1.3 In particular, it is essential that the plants produce a satisfactory crop of fruit in each of the two growing cycles.
- 3.1.4 The growing cycle is considered to be the duration of a single growing season, beginning with the dormancy period, followed by bud burst (flowering and/or vegetative), flowering and fruit harvest and concluding when the following dormant period starts.
- 3.1.5 The testing of a variety may be concluded when the competent authority can determine with certainty the outcome of the test.

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 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 or Parts of Plants to be Examined

Unless otherwise indicated, for the purposes of distinctness, all observations on single plants should be made on 5 plants or parts of plants taken from each of 5 plants and any other observations made on all plants in the test, disregarding any off-type plants.

In the case of observations of parts taken from single plants, the number of parts to be taken from each of the plants should be 2.

#### 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 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 These Test Guidelines have been developed for the examination of vegetatively propagated varieties. For varieties with other types of propagation, the recommendations in the General Introduction and document TGP/13 "Guidance for new types and species" Section 4.5 "Testing Uniformity" should be followed.
- 4.2.3 For the assessment of uniformity of 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 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) Very young shoot: anthocyanin coloration of apex during rapid growth (characteristic 3)
  - (b) Spines: presence (characteristic 10)
  - (c) Current year's cane: flowers (characteristic 24)
  - (d) Fruit: color (characteristic 32)
  - (e) Time of beginning of flowering on current season's cane (characteristic 39)
  - (f) Time of beginning of fruit ripening on current season's cane (characteristic 41)
- 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 All relevant states of expression are presented in the characteristic.
- 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

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

#### 6.5 Legend

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
1	2	3	4	5	6	7	
		Name of characteristics in English	Nom du caractère en français	Name des Merkmals auf Deutsch	Nombre del carácter en español		
		states of expression	types d'expression	Ausprägungsstufen	tipos de expresión		

- 1 Characteristic number
- 2 (\*) Asterisked characteristic – see Chapter 6.1.2
- 3 Type of expression
  - QL Qualitative characteristic – see Chapter 6.3
  - QN Quantitative characteristic – see Chapter 6.3
  - PQ Pseudo-qualitative characteristic – see Chapter 6.3
- 4 Method of observation (and type of plot, if applicable)
  - MG, MS, VG, VS – see Chapter 4.1.5
- 5 (+) See Explanations on the Table of Characteristics in Chapter 8.2
- 6 (a)-(f) See Explanations on the Table of Characteristics in Chapter 8.1
- 7 Not applicable

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

	English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
<b>1.</b>	<b>PQ</b>	<b>VG</b>	<b>(+)</b>	<b>(a)</b>				
	<b>Plant: growth habit</b>		<b>Plante : port</b>		<b>Pflanze: Wuchsform</b>	<b>Planta: hábito de crecimiento</b>		
	upright		dressé		aufrecht	erguido	Maravilla, Ontario	1
	semi-upright		demi-dressé		halbaufrecht	semierguido	Regina, Schönemann	2
	arching		arqué		überhängend	arqueado	Meeker, Pearl	3
<b>2. (*)</b>	<b>PQ</b>	<b>VG</b>	<b>(+)</b>	<b>(a)</b>				
	<b>Dormant cane: color</b>		<b>Canne dormante : couleur</b>		<b>Winterrute: Farbe</b>	<b>Rama latente: color</b>		
	brownish grey		gris brunâtre		bräunlichgrau	gris parduzco	NR 7, Schönemann	1
	greyish brown		brun grisâtre		gräulichbraun	marrón grisáceo	Meeker, Willamette	2
	brown		marron		braun	marrón	Glen Ample, Tulameen	3
	purplish brown		brun pourpre		purpurbraun	marrón violáceo	Radiance	4
	brownish purple		pourpre brunâtre		bräunlichpurpurn	púrpura parduzco	Black Jewel, Sanibelle	5
<b>3. (*)</b>	<b>QN</b>	<b>VG</b>						
	<b>Very young shoot: anthocyanin coloration of apex during rapid growth</b>		<b>Très jeune pousse : pigmentation anthocyanique de l'apex pendant la croissance rapide</b>		<b>Sehr junger Trieb: Anthocyanfärbung des Apex während des schnellen Wachstums</b>	<b>Brote muy joven: pigmentación antocianica del ápice durante el crecimiento rápido</b>		
	absent or very weak		absente ou très faible		fehlend oder sehr gering	ausente o muy débil		1
	very weak to weak		très faible à faible		sehr gering bis gering	muy débil a débil	Fallgold, Poranna Rosa	2
	weak		faible		gering	débil	Brilliance, Sapphire	3
	weak to medium		faible à moyenne		gering bis mittel	débil a media	Fruatfri, Sugana	4
	medium		moyenne		mittel	media	Regina, Tulameen	5
	medium to strong		moyenne à forte		mittel bis stark	media a fuerte	Malling Freya, Maravilla	6
	strong		forte		stark	fuerte	Polka, Sanibelle	7
	strong to very strong		forte à très forte		stark bis sehr stark	fuerte a muy fuerte	Royalty	8
	very strong		très forte		sehr stark	muy fuerte	Glen Moy, Malling Delight	9



	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
<b>4. (*)</b>	<b>QN</b>	<b>MG/VG</b>	<b>(+)</b>			
	<b>Plant: number of current season's canes</b>	<b>Plante : nombre de jeunes pousses</b>	<b>Pflanze: Anzahl diesjähriger Ruten</b>	<b>Planta: número de brotes del año</b>		
	very few	très petit	sehr gering	muy bajo		1
	very few to few	très petit à petit	sehr gering bis gering	muy bajo a bajo		2
	few	petit	gering	bajo	Tulameen	3
	few to medium	petit à moyen	gering bis mittel	bajo a medio	Pokusa, Qualicum	4
	medium	moyen	mittel	medio	Advarberimar, Fruatfri	5
	medium to many	moyen à élevé	mittel bis hoch	medio a alto	Grandeur, Regina	6
	many	élevé	hoch	alto	Pearl, Poranna Rosa	7
	many to very many	élevé à très élevé	hoch bis sehr hoch	alto a muy alto	Cascade Dawn, ma 2920	8
	very many	très élevé	sehr hoch	muy alto		9
<b>5. (*)</b>	<b>QN</b>	<b>MG/VG</b>	<b>(+)</b>	<b>(b)</b>		
	<b>Cane: length</b>	<b>Canne : longueur</b>	<b>Rute: Länge</b>	<b>Rama: longitud</b>		
	very short	très courte	sehr kurz	muy corta		1
	very short to short	très courte à courte	sehr kurz bis kurz	muy corta a corta	NR 7	2
	short	courte	kurz	corta		3
	short to medium	courte à moyenne	kurz bis mittel	corta a media	Advabertwee, Loganlike	4
	medium	moyenne	mittel	media	Advarberimar	5
	medium to long	moyenne à longue	mittel bis lang	media a larga	Drirasponse, Radiance	6
	long	longue	lang	larga	Schönemann, Tulameen	7
	long to very long	longue à très longue	lang bis sehr lang	larga a muy larga	Meeker, Royalty	8
	very long	très longue	sehr lang	muy larga	Malling Leo	9
<b>6.</b>	<b>QN</b>	<b>MG/VG</b>		<b>(b)</b>		
	<b>Cane: length of internode</b>	<b>Canne : longueur de l'entre-nœud</b>	<b>Rute: Internodienlänge</b>	<b>Rama: longitud del entrenudo</b>		
	very short	très courte	sehr kurz	muy corta		1
	short	courte	kurz	corta	Autumn Treasure, Poranna Rosa	2
	medium	moyenne	mittel	media	Glen Ample, Holyoke	3
	long	longue	lang	larga	Polka	4
	very long	très longue	sehr lang	muy larga		5

	English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
<b>7.</b>	<b>QN</b>	<b>MG/VG</b>	<b>(+)</b>	<b>(b)</b>				
	<b>Cane: length of vegetative bud</b>	<b>Canne : longueur de l'œil à bois</b>	<b>Rute: Länge der vegetativen Knospe</b>	<b>Rama: longitud de la yema de madera</b>				
	short	courte	kurz	corta	Autumn Bliss, Drisraspsix		1	
	medium	moyenne	mittel	media	Driscoll Madonna, Grandeur		2	
	long	longue	lang	larga	Schönemann		3	
<b>8.</b>	<b>QN</b>	<b>VG</b>	<b>(+)</b>	<b>(b)</b>				
	<b>Cane: anthocyanin coloration</b>	<b>Canne : pigmentation anthocyanique</b>	<b>Rute: Anthocyanfärbung</b>	<b>Rama: pigmentación antocianica</b>				
	absent or very weak	absente ou très faible	fehlend oder sehr gering	ausente o muy débil	Poranna Rosa, Valentina		1	
	weak	faible	gering	débil	Cardinal, Vajolet		2	
	medium	moyenne	mittel	media	Holyoke, Rafzaqu		3	
	strong	forte	stark	fuerte	Drisraspfour, Malling Juno		4	
	very strong	très forte	sehr stark	muy fuerte			5	
<b>9.</b>	<b>QN</b>	<b>VG</b>	<b>(+)</b>	<b>(b)</b>				
	<b>Cane: bloom</b>	<b>Canne : pruine</b>	<b>Rute: Bereifung</b>	<b>Rama: pruina</b>				
	absent or very weak	absente ou très faible	fehlend oder sehr gering	ausente o muy débil	Adelita, Lupita		1	
	very weak to weak	très faible à faible	sehr gering bis gering	muy débil a débil	Bountiful, Diamond Jubilee		2	
	weak	faible	gering	débil	Fruatfri, Regina		3	
	weak to medium	faible à moyenne	gering bis mittel	débil a media	Meeker, Qualicum		4	
	medium	moyenne	mittel	media	ma 2920, Rafzmach		5	
	medium to strong	moyenne à forte	mittel bis stark	media a fuerte	Lagorai Plus, NR 7		6	
	strong	forte	stark	fuerte	Advabereen, Sanibelle		7	
	strong to very strong	forte à très forte	stark bis sehr stark	fuerte a muy fuerte	Brilliance, Pokusa		8	
	very strong	très forte	sehr stark	muy fuerte	Ontario, Royalty		9	
<b>10. (*)</b>	<b>QL</b>	<b>VG</b>	<b>(+)</b>	<b>(c)</b>				
	<b>Spines: presence</b>	<b>Épines : présence</b>	<b>Stacheln: Vorhandensein</b>	<b>Espinas: presencia</b>				
	absent	absente	fehlend	ausente	Glen Ample, NR 7		1	
	present	présente	vorhanden	presente	Malling Promise, Regina		9	

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
<b>11.</b>	<b>QN</b>	<b>MG/VG</b>	<b>(c)</b>			
	<b>Spines: length</b>	<b>Épines : longueur</b>	<b>Stacheln: Länge</b>	<b>Espinas: longitud</b>		
	very short	très courte	sehr kurz	muy corta	Resa	1
	short	courte	kurz	corta	Carmelina, Grandeur	2
	medium	moyenne	mittel	media	Fruatfri, Regina	3
	long	longue	lang	larga	BP 1, Drisrasptwo	4
	very long	très longue	sehr lang	muy larga	Black Jewel, Lowden	5
<b>12.</b>	<b>PQ</b>	<b>VG</b>	<b>(c)</b>			
	<b>Spines: color</b>	<b>Épines : couleur</b>	<b>Stacheln: Farbe</b>	<b>Espinas: color</b>		
	green	vert	grün	verde	Golden Bliss, Poranna Rosa	1
	brownish green	vert brunâtre	bräunlichgrün	verde parduzco	Brilliance, Holyoke	2
	greenish brown	brun verdâtre	grünlichbraun	marrón verdoso	Advabereen, Radiance	3
	brown	marron	braun	marrón	Glen Magna, Rusilva	4
	purplish brown	brun pourpre	purpurbraun	marrón violáceo	Cardinal, Fruatfri	5
	brownish purple	pourpre brunâtre	bräunlichpurpurn	púrpura parduzco	Maravilla, Octavia	6
	purple	pourpre	purpurn	púrpura	Polka, Sugana	7
<b>13.</b>	<b>QN</b>	<b>VG</b>	<b>(+)</b>	<b>(c)</b>		
	<b>Spines: size of base</b>	<b>Épines : taille de la base</b>	<b>Stacheln: Größe der Basis</b>	<b>Espinas: tamaño de la base</b>		
	very small	très petite	sehr klein	muy pequeño		1
	very small to small	très petite à petite	sehr klein bis klein	muy pequeño a pequeño	Gleam	2
	small	petite	klein	pequeño	Driscoll Pacífica, Rafzmach	3
	small to medium	petite à moyenne	klein bis mittel	pequeño a medio	Octavia, Radiance	4
	medium	moyenne	mittel	medio	Cardinal, Regina	5
	medium to large	moyenne à grande	mittel bis groß	medio a grande	Fruatfri, Vajolet	6
	large	grande	groß	grande	BP 1, Dolomia Plus	7
	large to very large	grande à très grande	groß bis sehr groß	grande a muy grande	Josephine	8
	very large	très grande	sehr groß	muy grande	Black Jewel, Lowden	9

	English		français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
<b>14. (*)</b>	<b>QN</b>	<b>VG</b>	<b>(c)</b>				
	<b>Spines: density</b>	<b>Épines : densité</b>	<b>Stacheln: Dichte</b>	<b>Espinas: densidad</b>			
	very sparse	très lâche	sehr locker	muy laxa	Ontario	1	
	very sparse to sparse	très lâche à lâche	sehr locker bis locker	muy laxa a laxa	Festival, Korbfüller	2	
	sparse	lâche	locker	laxa	Valentina	3	
	sparse to medium	lâche à moyenne	locker bis mittel	laxa a media	Maravilla, Tulameen	4	
	medium	moyenne	mittel	media	Lupita, Octavia	5	
	medium to dense	moyenne à dense	mittel bis dicht	media a densa	ma 2920, Schönemann	6	
	dense	dense	dicht	densa	Fruatfri, Regina	7	
	dense to very dense	dense à très dense	dicht bis sehr dicht	densa a muy densa	Golden Bliss	8	
	very dense	très dense	sehr dicht	muy densa	Lloyd George	9	
<b>15. (*)</b>	<b>PQ</b>	<b>VG</b>	<b>(d)</b>				
	<b>Leaf: color of upper side</b>	<b>Feuille : couleur de la face supérieure</b>	<b>Blatt: Farbe der Oberseite</b>	<b>Hoja: color del haz</b>			
	greenish yellow	jaune verdâtre	grünlichgelb	amarillo verdoso	JDEBOER005	1	
	light green	vert clair	hellgrün	verde claro	Skeena, Watson	2	
	medium green	vert moyen	mittelgrün	verde medio	Autumn Bliss, Isabel	3	
	dark green	vert foncé	dunkelgrün	verde oscuro	Dolomia Plus	4	
<b>16. (*)</b>	<b>PQ</b>	<b>VG</b>	<b>(d)</b>				
	<b>Leaf: predominant number of leaflets</b>	<b>Feuille : nombre prédominant de folioles</b>	<b>Blatt: vorwiegende Anzahl von Blattfiedern</b>	<b>Hoja: número predominante de folíolos</b>			
	three	trois	drei	tres	Autumn Treasure, Lupita	1	
	equally three and five	parfois trois, parfois cinq	drei und fünf zu gleichen Teilen	tanto tres como cinco	Fruatfri, Lagorai Plus	2	
	five	cinq	fünf	cinco	Ontario, Sanibelle	3	
<b>17.</b>	<b>QN</b>	<b>VG</b>	<b>(+)</b>	<b>(d)</b>			
	<b>Leaf: arrangement of leaflets</b>	<b>Feuille : disposition des folioles</b>	<b>Blatt: Anordnung der Blattfiedern</b>	<b>Hoja: disposición de los folíolos</b>			
	free	libre	freistehend	libre	Lupita, Regina	1	
	touching	tangente	sich berührend	en contacto	Jade, ma 2920	2	
	overlapping	se recouvrante	überlappend	solapada	Fruatfri	3	

	English	français	deutsch	español	Example Varieties Exemples Beispielsorten Variedades ejemplo	Note/ Nota
<b>18.</b>	<b>QN</b>	<b>MG/VG</b>	<b>(d)</b>			
	<b>Terminal leaflet: length</b>	<b>Foliolle terminale : longueur</b>	<b>Endfieder: Länge</b>	<b>Folíolo superior: longitud</b>		
	very short	très courte	sehr kurz	muy corta		1
	very short to short	très courte à courte	sehr kurz bis kurz	muy corta a corta		2
	short	courte	kurz	corta	NR 7	3
	short to medium	courte à moyenne	kurz bis mittel	corta a media	JDEBOER005	4
	medium	moyenne	mittel	media	Glen Carron	5
	medium to long	moyenne à longue	mittel bis lang	media a larga	Advabereen, ma 2920	6
	long	longue	lang	larga	Amaranta, Versailles	7
	long to very long	longue à très longue	lang bis sehr lang	larga a muy larga	Dolomia Plus, Polka	8
	very long	très longue	sehr lang	muy larga	Motueka, Tea	9
<b>19.</b>	<b>QN</b>	<b>MG/VG</b>	<b>(d)</b>			
	<b>Terminal leaflet: width</b>	<b>Foliolle terminale : largeur</b>	<b>Endfieder: Breite</b>	<b>Folíolo superior: anchura</b>		
	very narrow	très étroite	sehr schmal	muy estrecha		1
	very narrow to narrow	très étroite à étroite	sehr schmal bis schmal	muy estrecha a estrecha		2
	narrow	étroite	schmal	estrecha	Summit	3
	narrow to medium	étroite à moyenne	schmal bis mittel	estrecha a media	Caroline	4
	medium	moyenne	mittel	media	Advabertwee, Drirasponse	5
	medium to broad	moyenne à large	mittel bis breit	media a ancha	Brilliance, Joan J	6
	broad	large	breit	ancha	Fruatfri, Sugana	7
	broad to very broad	large à très large	breit bis sehr breit	ancha a muy ancha	Regina	8
	very broad	très large	sehr breit	muy ancha	Malling Sirius, Tea	9
<b>20.</b>	<b>QN</b>	<b>VG</b>	<b>(+)</b>	<b>(d)</b>		
	<b>Terminal leaflet: profile in cross section</b>	<b>Foliolle terminale : profil en section transversale</b>	<b>Endfieder: Profil im Querschnitt</b>	<b>Folíolo superior: perfil en sección transversal</b>		
	concave	concave	konkav	cóncavo	NR 7, Pearl	1
	straight	droit	gerade	recto	ma 2920, Versailles	2
	convex	convexe	konvex	convexo	Grandeur, Heritage	3

	English		français		deutsch	español	Example Varieties Exemples Beispielsorten Variedades ejemplo	Note/ Nota
<b>21. (*)</b>	<b>QN</b>	<b>VG</b>	<b>(+)</b>	<b>(d)</b>				
	<b>Terminal leaflet: undulation</b>	<b>Foliolo terminale : ondulation</b>	<b>Endfieder: Randwellung</b>	<b>Foliolo superior: ondulación</b>				
	very weak	très faible	sehr gering	muy débil	Heritage		1	
	weak	faible	gering	débil	Gleam		2	
	medium	moyenne	mittel	media	Advarberimar, Pearl		3	
	strong	forte	stark	fuerte	Sugana, Vajolet		4	
	very strong	très forte	sehr stark	muy fuerte	Korbfüller		5	
<b>22. (*)</b>	<b>QN</b>	<b>MG/VG</b>						
	<b>Previous year's cane: length of fruiting lateral</b>	<b>Canne de l'année précédente : longueur du rameau fructifère</b>	<b>Vorjahresrute: Länge der fruchtenden Seitentriebe</b>	<b>Rama del año anterior: longitud de la fructificación lateral</b>				
	very short	très courte	sehr kurz	muy corta			1	
	very short to short	très courte à courte	sehr kurz bis kurz	muy corta a corta	Vene		2	
	short	courte	kurz	corta	Glen Moy		3	
	short to medium	courte à moyenne	kurz bis mittel	corta a media	Driscoll Pacifica		4	
	medium	moyenne	mittel	media	Radiance, Sugana		5	
	medium to long	moyenne à longue	mittel bis lang	media a larga	Regina, Versailles		6	
	long	longue	lang	larga	Glen Ample		7	
	long to very long	longue à très longue	lang bis sehr lang	larga a muy larga	Malling Leo		8	
	very long	très longue	sehr lang	muy larga			9	
<b>23.</b>	<b>QN</b>	<b>VG</b>						
	<b>Previous year's cane: attitude of fruiting lateral</b>	<b>Canne de l'année précédente : port du rameau fructifère</b>	<b>Vorjahresrute: Haltung der fruchtenden Seitentriebe</b>	<b>Rama del año anterior: porte de la fructificación lateral</b>				
	upright	dressé	aufrecht	erguido	Advarberimar, NR 7		1	
	semi-upright	demi-dressé	halbaufrecht	semierguido	Bountiful, Sapphire		2	
	horizontal to downwards	horizontale a pendant	waagrecht bis abwärts gerichtet	de horizontal a orientado hacia abajo	Malling Freya		3	
<b>24. (*)</b>	<b>QL</b>	<b>VG</b>						
	<b>Current year's cane: flowers</b>	<b>Jeune canne : fleurs</b>	<b>Jahresrute: Blüten</b>	<b>Rama del año en curso: flores</b>				
	absent	absentes	fehlend	ausentes	Glen Ample		1	
	present	présentes	vorhanden	presentes	Autumn Bliss		9	

	English		français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
<b>25. (*)</b>	<b>QN</b>	<b>VG</b>	<b>(e)</b>				
	<b>Peduncle: intensity of anthocyanin coloration</b>	<b>Pédoncule : intensité de la pigmentation anthocyanique</b>	<b>Blütenstandsstiel: Intensität der Anthocyanfärbung</b>	<b>Pedúnculo: intensidad de la pigmentación antocianica</b>			
	absent or very weak	absente ou très faible	fehlend oder sehr gering	ausente o muy débil	Golden Bliss	1	
	very weak to weak	très faible à faible	sehr gering bis gering	muy débil a débil	Autumn Bliss, Joan J	2	
	weak	faible	gering	débil	Fruatfri, Lupita	3	
	weak to medium	faible à moyenne	gering bis mittel	débil a media	NR 7	4	
	medium	moyenne	mittel	media	Grandeur, Radiance	5	
	medium to strong	moyenne à forte	mittel bis stark	media a fuerte	Malling Juno, Qualicum	6	
	strong	forte	stark	fuerte	Advabereen, Brilliance	7	
	strong to very strong	forte à très forte	stark bis sehr stark	fuerte a muy fuerte	ABB 122, Glen Doll	8	
	very strong	très forte	sehr stark	muy fuerte	Rafzmach	9	
<b>26.</b>	<b>QN</b>	<b>MG/VG</b>	<b>(e)</b>				
	<b>Pedicele: number of spines</b>	<b>Pédicelle : nombre d'épines</b>	<b>Blütenstiel: Anzahl Stacheln</b>	<b>Pedicele: número de espinas</b>			
	absent or very few	très petit	sehr gering	ausente o muy bajo	Glen Moy, Malling Juno	1	
	very few to few	très petit à petit	sehr gering bis gering	muy bajo a bajo	JDEBOER005, Wakefield	2	
	few	petit	gering	bajo	Bountiful, Lagorai Plus	3	
	few to medium	petit à moyen	gering bis mittel	bajo a medio	Diamond Jubilee, Drirasponse	4	
	medium	moyen	mittel	medio	Fruatfri, Octavia	5	
	medium to many	moyen à élevé	mittel bis hoch	medio a alto	Maravilla, Sugana	6	
	many	élevé	hoch	alto	Holyoke, Poranna Rosa	7	
	many to very many	élevé à très élevé	hoch bis sehr hoch	alto a muy alto	Autumn Bliss, Satine	8	
	very many	très élevé	sehr hoch	muy alto	Golden Bliss	9	
<b>27.</b>	<b>QN</b>	<b>MG/VG</b>	<b>(+)</b>	<b>(e)</b>			
	<b>Flower: diameter</b>	<b>Fleur : diamètre</b>	<b>Blüte: Durchmesser</b>	<b>Flor: diámetro</b>			
	very small	très petit	sehr klein	muy pequeño		1	
	very small to small	très petit à petit	sehr klein bis klein	muy pequeño a pequeño	Trent	2	
	small	petit	klein	pequeño	Bella, Ontario	3	
	small to medium	petit à moyen	klein bis mittel	pequeño a medio	Brilliance, Radiance	4	
	medium	moyen	mittel	medio	ma 2920, Pearl	5	
	medium to large	moyen à grand	mittel bis groß	medio a grande	Joan J	6	
	large	grand	groß	grande	Evita, Lagorai Plus	7	
	large to very large	grand à très grand	groß bis sehr groß	grande a muy grande	Amaranta	8	
	very large	très grand	sehr groß	muy grande		9	

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
<b>28. (*)</b>	<b>QN</b>	<b>MG/VG</b>	<b>(e), (f)</b>			
	<b>Fruit: length</b>	<b>Fruit : longueur</b>	<b>Frucht: Länge</b>	<b>Fruto: longitud</b>		
	very short	très courte	sehr kurz	muy corta		1
	very short to short	très courte à courte	sehr kurz bis kurz	muy corta a corta		2
	short	courte	kurz	corta	Golden Queen	3
	short to medium	courte à moyenne	kurz bis mittel	corta a media	Golden Bliss	4
	medium	moyenne	mittel	media	Octavia, Sugana	5
	medium to long	moyenne à longue	mittel bis lang	media a larga	Brilliance, Rafzaqu	6
	long	longue	lang	larga	Driscoll Pacifica, Radiance	7
	long to very long	longue à très longue	lang bis sehr lang	larga a muy larga	Lagorai Plus, Maravilla	8
	very long	très longue	sehr lang	muy larga	Evita	9
<b>29. (*)</b>	<b>QN</b>	<b>MG/VG</b>	<b>(e), (f)</b>			
	<b>Fruit: width</b>	<b>Fruit : largeur</b>	<b>Frucht: Breite</b>	<b>Fruto: anchura</b>		
	very narrow	très étroite	sehr schmal	muy estrecha		1
	narrow	étroite	schmal	estrecha		2
	medium	moyenne	mittel	media	ma 2920, Rafzmach	3
	broad	large	breit	ancha	Lagorai Plus, Pearl	4
	very broad	très large	sehr breit	muy ancha	Evita	5
<b>30. (*)</b>	<b>PQ</b>	<b>VG</b>	<b>(+)</b>		<b>(e), (f)</b>	
	<b>Fruit: shape in lateral view</b>	<b>Fruit : forme en vue latérale</b>	<b>Frucht: Form in Seitenansicht</b>	<b>Fruto: forma en vista lateral</b>		
	circular	circulaire	kreisförmig	circular	Black Jewel	1
	broad conical	conique large	breit kegelförmig	cónica ancha	Autumn Bliss, Glen Ample	2
	conical	conique	kegelförmig	cónica	Autumn Treasure, Maravilla	3
	trapezoidal	trapézoïdale	trapezförmig	trapezoidal	Titan	4
<b>31.</b>	<b>QN</b>	<b>VG</b>	<b>(e), (f)</b>			
	<b>Fruit: size of single drupe</b>	<b>Fruit : taille d'une drupe simple</b>	<b>Frucht: Größe der Einzelsteinfrucht</b>	<b>Fruto: tamaño de la drupa</b>		
	very small	très petite	sehr klein	muy pequeño		1
	small	petite	klein	pequeño	Jochems Roem	2
	medium	moyenne	mittel	medio	Carmelina, Qualicum	3
	large	grande	groß	grande	Maravilla, Octavia	4
	very large	très grande	sehr groß	muy grande	Pokusa	5



	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
<b>32. (*)</b>	<b>PQ</b>	<b>VG</b>	<b>(e), (f)</b>			
	<b>Fruit: color</b>	<b>Fruit : couleur</b>	<b>Frucht: Farbe</b>	<b>Fruto: color</b>		
	yellow	jaune	gelb	amarillo	Golden Bliss, Sungold	1
	orange	orange	orange	naranja	Valentina	2
	light red	rouge clair	hellrot	rojo claro	Qualicum, Vision	3
	medium red	rouge moyen	mittelrot	rojo medio	Diamond Jubilee, Pearl	4
	dark red	rouge foncé	dunkelrot	rojo oscuro	Bella, BP 1	5
	purple	pourpre	purpurn	púrpura	Glen Coe, Royalty	6
	blackish	noirâtre	schwärzlich	negruzco	Black Jewel	7
<b>33.</b>	<b>QN</b>	<b>VG</b>	<b>(e), (f)</b>			
	<b>Fruit: glossiness</b>	<b>Fruit : brillance</b>	<b>Frucht: Glanz</b>	<b>Fruto: brillo</b>		
	very weak	très faible	sehr gering	muy débil		1
	weak	faible	gering	débil	Glen Magna, Poranna Rosa	2
	medium	moyenne	mittel	medio	Pearl, Sapphire	3
	strong	forte	stark	fuerte	Advabertwee, Sanibelle	4
	very strong	très forte	sehr stark	muy fuerte		5
<b>34. (*)</b>	<b>QN</b>	<b>MG/VG</b>	<b>(e), (f)</b>			
	<b>Fruit: firmness</b>	<b>Fruit : fermeté</b>	<b>Frucht: Festigkeit</b>	<b>Fruto: firmeza</b>		
	very soft	très molle	sehr weich	muy blanda		1
	soft	molle	weich	blanda	Fallred, Golden Queen	2
	medium	moyenne	mittel	media	Brilliance, Meeker	3
	firm	ferme	fest	firme	Advabereen, Maravilla	4
	very firm	très ferme	sehr fest	muy firme		5
<b>35.</b>	<b>PQ</b>	<b>VG</b>	<b>(+)</b>	<b>(e), (f)</b>		
	<b>Fruit: color of torus at distal end</b>	<b>Fruit : couleur du tore à la partie distale</b>	<b>Frucht: Farbe des Torus am distalen Ende</b>	<b>Fruto: color del torus en el extremo distal</b>		
	greenish	verdâtre	grünlich	verdoso	NR 7	1
	whitish	blanchâtre	weißlich	blanquecino		2
	yellowish white	blanc jaunâtre	gelblichweiß	blanco amarillento	Drirasphirteen	3
	orange reddish	orange rougeâtre	rötlicorange-	naranja rojizo	Driraspsix	4

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
<b>36. (*)</b>	<b>QN</b>	<b>MG/VG</b>				
	<b>Time of vegetative bud burst</b>	<b>Époque de débourrement végétatif</b>	<b>Zeitpunkt des Ausbruchs der vegetativen Knospe</b>	<b>Época de aparición de la yema de madera</b>		
	very early	très précoce	sehr früh	muy temprana		1
	very early to early	très précoce à précoce	sehr früh bis früh	muy temprana a temprana	Pacific Gema	2
	early	précoce	früh	temprana	Grandeur	3
	early to medium	précoce à moyenne	früh bis mittel	temprana a media	Advabertwee, Brilliance	4
	medium	moyenne	mittel	media	Advarberimar, Lagorai Plus	5
	medium to late	moyenne à tardive	mittel bis spät	media a tardía	Glen Ample, Vajolet	6
	late	tardive	spät	tardía	Glen Magna	7
	late to very late	tardive à très tardive	spät bis sehr spät	tardía a muy tardía	Drirasppfour	8
	very late	très tardive	sehr spät	muy tardía		9
<b>37. (*)</b>	<b>QN</b>	<b>MG/VG</b>				
	<b>Time of cane emergence</b>	<b>Début de la croissance de la canne</b>	<b>Beginn des Triebwachstums</b>	<b>Época de crecimiento de la rama</b>		
	very early	très précoce	sehr früh	muy temprana		1
	very early to early	très précoce à précoce	sehr früh bis früh	muy temprana a temprana	Driraspphirteen, Majestic	2
	early	précoce	früh	temprana	Sungold	3
	early to medium	précoce à moyenne	früh bis mittel	temprana a media	ma 2920, Maravilla	4
	medium	moyenne	mittel	media	Lagorai Plus, Sugana	5
	medium to late	moyenne à tardive	mittel bis spät	media a tardía	Amaranta, Tulameen Plus	6
	late	tardive	spät	tardía	Glen Fyne	7
	late to very late	tardive à très tardive	spät bis sehr spät	tardía a muy tardía	Glen Ample	8
	very late	très tardive	sehr spät	muy tardía	Malling Juno, Valentina	9

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
<b>38. (*)</b>	<b>QN</b>	<b>MG/VG</b>	<b>(+)</b>			
	<b>Time of beginning of flowering on previous year's cane</b>	<b>Époque du début de la floraison sur la canne de l'année précédente</b>	<b>Zeitpunkt des Blühbeginns an der Vorjahresrute</b>	<b>Época de comienzo de la floración en la rama del año anterior</b>		
	very early	très précoce	sehr früh	muy temprana		1
	very early to early	très précoce à précoce	sehr früh bis früh	muy temprana a temprana	Malling Freya	2
	early	précoce	früh	temprana	Advabereen, Malling Juno	3
	early to medium	précoce à moyenne	früh bis mittel	temprana a media	Brilliance, Fruatfri, Glen Fyne	4
	medium	moyenne	mittel	media	Sapphire	5
	medium to late	moyenne à tardive	mittel bis spät	media a tardía	Drirasponse, Grandeur	6
	late	tardive	spät	tardía	Octavia, Tulameen Plus	7
	late to very late	tardive à très tardive	spät bis sehr spät	tardía a muy tardía	Annamaria	8
	very late	très tardive	sehr spät	muy tardía		9
<b>39. (*)</b>	<b>QN</b>	<b>MG/VG</b>	<b>(+)</b>			
	<b>Time of beginning of flowering on current season's cane</b>	<b>Époque du début de la floraison sur la jeune canne</b>	<b>Zeitpunkt des Blühbeginns an der Jahresrute</b>	<b>Época de comienzo de la floración en la rama del año en curso</b>		
	very early	très précoce	sehr früh	muy temprana		1
	very early to early	très précoce à précoce	sehr früh bis früh	muy temprana a temprana	Polana	2
	early	précoce	früh	temprana	Adelita, Polka	3
	early to medium	précoce à moyenne	früh bis mittel	temprana a media	Brilliance, ma 2920	4
	medium	moyenne	mittel	media	Rafzaqu, Regina	5
	medium to late	moyenne à tardive	mittel bis spät	media a tardía	Maravilla, Sugana	6
	late	tardive	spät	tardía	Advabertwee, Vajolet	7
	late to very late	tardive à très tardive	spät bis sehr spät	tardía a muy tardía	Drirasponse, Lagorai Plus	8
	very late	très tardive	sehr spät	muy tardía	Driscoll Madonna, Pearl	9

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
<b>40. (*)</b>	<b>QN</b>	<b>MG/VG</b>	<b>(+)</b>			
	<b>Time of beginning of fruit ripening on previous year's cane</b>	<b>Époque du début de maturité des fruits sur la canne de l'année précédente</b>	<b>Zeitpunkt des Beginns der Fruchtreife an der Vorjahresrute</b>	<b>Época de comienzo de madurez del fruto en la rama del año anterior</b>		
	very early	très précoce	sehr früh	muy temprana		1
	very early to early	très précoce à précoce	sehr früh bis früh	muy temprana a temprana	ABB 122, Malling Freya	2
	early	précoce	früh	temprana	Advabereen, Lupita	3
	early to medium	précoce à moyenne	früh bis mittel	temprana a media	Adelita, Advarberimar	4
	medium	moyenne	mittel	media	Advabertwee, Radiance	5
	medium to late	moyenne à tardive	mittel bis spät	media a tardía	Mayfair, Satine	6
	late	tardive	spät	tardía	Grandeur, Octavia	7
	late to very late	tardive à très tardive	spät bis sehr spät	tardía a muy tardía	Lowden	8
	very late	très tardive	sehr spät	muy tardía	Augusta	9
<b>41. (*)</b>	<b>QN</b>	<b>MG/VG</b>	<b>(+)</b>			
	<b>Time of beginning of fruit ripening on current season's cane</b>	<b>Époque du début de maturité des fruits sur la jeune canne</b>	<b>Zeitpunkt des Beginns der Fruchtreife an diesjährigen Ruten</b>	<b>Época de comienzo de madurez del fruto en la rama del año en curso</b>		
	very early	très précoce	sehr früh	muy temprana		1
	very early to early	très précoce à précoce	sehr früh bis früh	muy temprana a temprana	Autumn Bliss	2
	early	précoce	früh	temprana	Isabel, Sugana	3
	early to medium	précoce à moyenne	früh bis mittel	temprana a media	Advarberimar, Grandeur	4
	medium	moyenne	mittel	media	Drirasptwo, NY One	5
	medium to late	moyenne à tardive	mittel bis spät	media a tardía	Brilliance	6
	late	tardive	spät	tardía	Advabertwee	7
	late to very late	tardive à très tardive	spät bis sehr spät	tardía a muy tardía	ABB 122	8
	very late	très tardive	sehr spät	muy tardía		9

## 8. Explanations on the Table of Characteristics

### 8.1 *Explanations covering several characteristics*

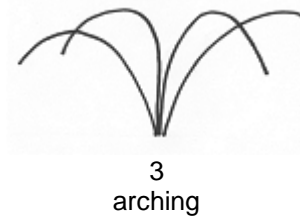
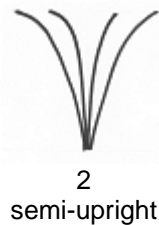
Characteristics containing the following key in the Table of Characteristics should be examined as indicated below:

- (a) Observations should be made when the cane is fully developed.
- (b) Observations should be made on current season's canes.
- (c) Observations should be made in the middle third of the cane, when the cane is fully developed.
- (d) Observations should be made on fully developed leaves from the middle third of the cane.
- (e) Observations should be made on canes which flower and fruit first in the vegetation period, either on previous year's canes in summer or on current year's canes in autumn.
- (f) Observations should be made on fruit picked during the second and third harvest.

### 8.2 *Explanations for individual characteristics*

#### Ad. 1: Plant: growth habit

Observations should be made on fully developed current season's shoots, before flowering.



#### Ad. 2: Dormant cane: color

If the canes peel the unpeeled area should be observed.

#### Ad. 4: Plant: number of current season's canes

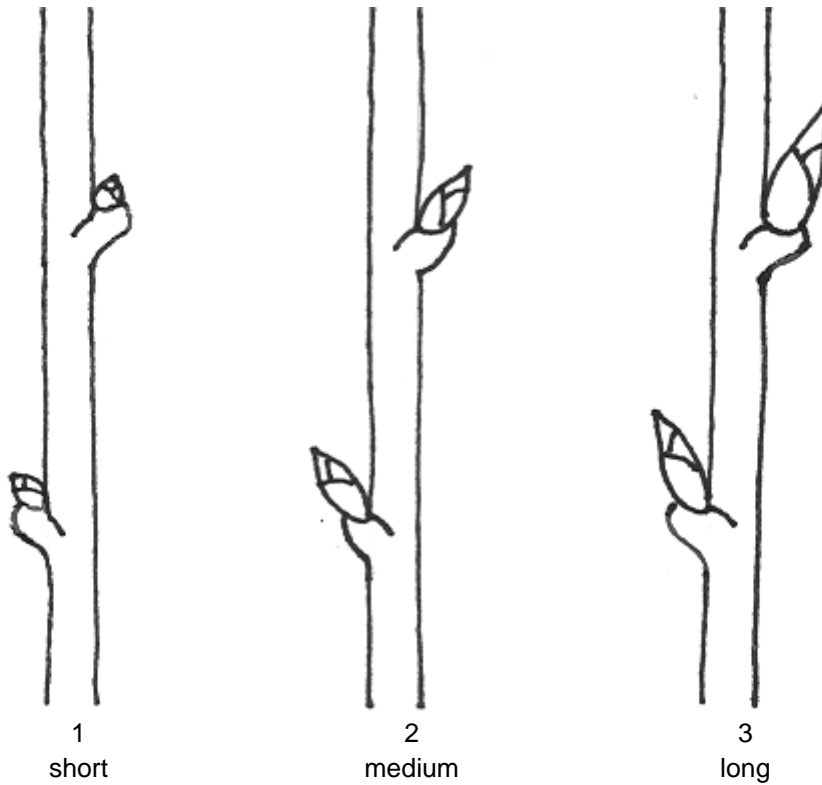
Should be assessed when the canes are about 15 cm long.

#### Ad. 5: Cane: length

Observations should be made at the end of the vegetation period.

Ad. 7: Cane: length of vegetative bud

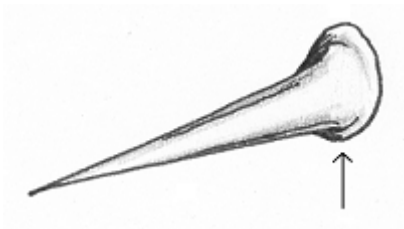
Observations should be made in the middle third of the cane.



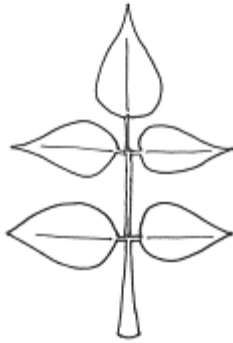
Ad. 9: Cane: bloom

Observations should be made on the glaucosity on the surface of the cane.

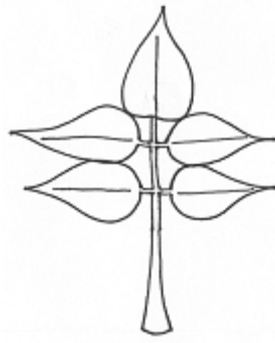
Ad. 13: Spines: size of base



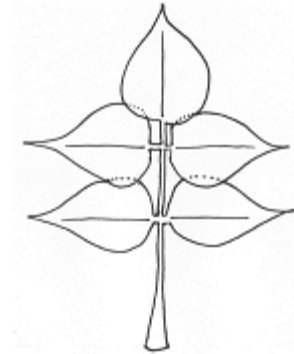
Ad. 17: Leaf: arrangement of leaflets



1  
free



2  
touching



3  
overlapping

Ad. 20: Terminal leaflet: profile in cross section



1  
concave



2  
straight



3  
convex

Ad. 21: Terminal leaflet: undulation

Should be assessed as the folding along / between the lateral veins.



1  
very weak



2  
weak



3  
medium



4  
strong

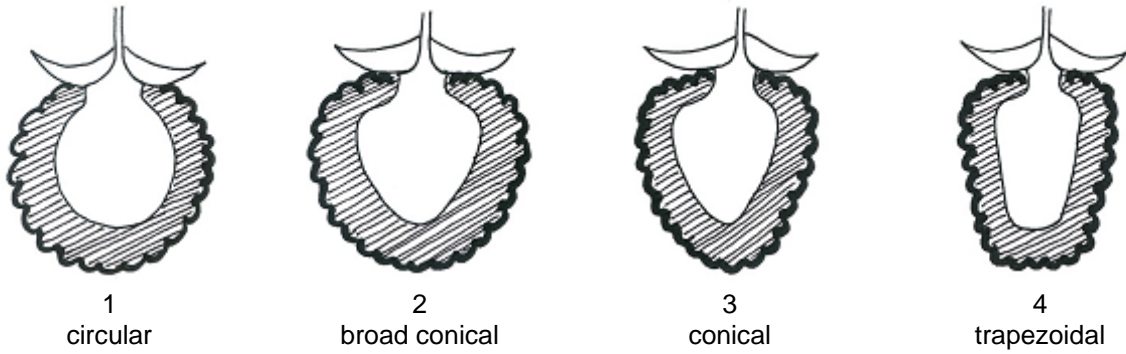


5  
very strong

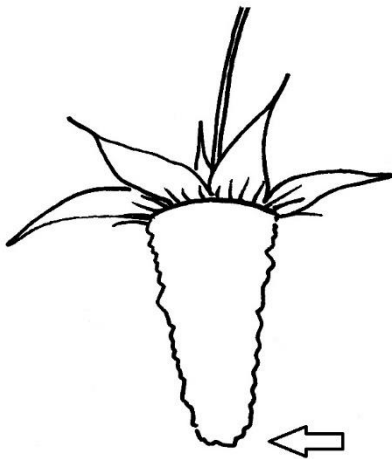
Ad. 27: Flower: diameter

The observation should be made with petals pressed into horizontal position.

Ad. 30: Fruit: shape in lateral view



Ad. 35: Fruit: color of torus at distal end



Ad. 38: Time of beginning of flowering on previous year's cane

The time of beginning of flowering is reached when 10% of the flowers have opened.

Ad. 39: Time of beginning of flowering on current season's cane

See Ad. 38

Ad. 40: Time of beginning of fruit ripening on previous year's cane

The time of beginning of fruit ripening is reached when the fruit is most easily removed from the torus.

Ad. 41: Time of beginning of fruit ripening on current season's cane

See Ad. 40



9. Literature

Bundessortenamt, 2006: Beschreibende Sortenliste Himbeere, Brombeere, Deutscher Landwirtschaftsverlag GmbH, Hannover, DE.

Edin, M.; Gaillard, P.; Massardier, P., 1999: Le framboisier. Monographie Ctifl.

Leemans, J.A.; Nannenga, E.T., 1957: A Morphological Classification of Raspberry varieties. Instituut voor de veredeling van tuinbouwgewassen, Wageningen, NL.

10. Technical Questionnaire

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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	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		
1.1.1	Botanical name	<input type="text" value="Rubus idaeus L."/> [ ]
1.1.2	Common name	<input type="text" value="Raspberry"/>
1.2.1	Botanical name	<input type="text" value="Rubus occidentalis L."/> [ ]
1.2.2	Common name	<input type="text" value="Black Raspberry, Blackcap, Thimbleberry"/>
1.3.1	Botanical name	<input type="text" value="Rubus idaeus L. x Rubus x neglectus Peck"/> [ ]
1.3.2	Common name	<input type="text"/>
1.4.1	Botanical name	<input type="text" value="Rubus idaeus L. x Rubus occidentalis L."/> [ ]
1.4.2	Common name	<input type="text"/>
1.5.1	Botanical name	<input type="text" value="Rubus idaeus L. x Rubus parviflorus L."/> [ ]
1.5.2	Common name	<input type="text"/>
1.6.1	Botanical name	<input type="text" value="Hybrids with other species of Rubus L."/> [ ]
1.6.2	Species (please indicate):	<input type="text"/>

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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2.	Applicant	
	Name	<input type="text"/>
	Address	<input type="text"/>
	Telephone No.	<input type="text"/>
	Fax No.	<input type="text"/>
	E-mail address	<input type="text"/>
	Breeder (if different from applicant)	<input type="text"/>

3.	Proposed denomination and breeder's reference	
	Proposed denomination (if available)	<input type="text"/>
	Breeder's reference	<input type="text"/>

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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#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 variety)

(.....) 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.

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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4.2	Method of propagating the variety	
4.2.1	Vegetative propagation	
(a)	<i>In vitro</i> propagation	[ ]
(b)	Rhizomes	[ ]
(c)	Other (state method)	[ ]
	<input type="text"/>	
4.2.2	Other (Please provide details)	[ ]
	<input type="text"/>	

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
<b>5.1</b>	<b>Dormant cane: color</b>		
<b>(2)</b>			
	brownish grey	NR 7, Schönemann	1 [ ]
	greyish brown	Meeker, Willamette	2 [ ]
	brown	Glen Ample, Tulameen	3 [ ]
	purplish brown	Radiance	4 [ ]
	brownish purple	Black Jewel, Sanibelle	5 [ ]
<b>5.2</b>	<b>Plant: number of current season's canes</b>		
<b>(4)</b>			
	very few		1 [ ]
	very few to few		2 [ ]
	few	Tulameen	3 [ ]
	few to medium	Pokusa, Qualicum	4 [ ]
	medium	Advarberimar, Fruatfri	5 [ ]
	medium to many	Grandeur, Regina	6 [ ]
	many	Pearl, Poranna Rosa	7 [ ]
	many to very many	Cascade Dawn, ma 2920	8 [ ]
	very many		9 [ ]
<b>5.3</b>	<b>Spines: presence</b>		
<b>(10)</b>			
	absent	Glen Ample, NR 7	1 [ ]
	present	Malling Promise, Regina	9 [ ]
<b>5.4</b>	<b>Current year's cane: flowers</b>		
<b>(24)</b>			
	absent	Glen Ample	1 [ ]
	present	Autumn Bliss	9 [ ]
<b>5.5</b>	<b>Fruit: shape in lateral view</b>		
<b>(30)</b>			
	circular	Black Jewel	1 [ ]
	broad conical	Autumn Bliss, Glen Ample	2 [ ]
	conical	Autumn Treasure, Maravilla	3 [ ]
	trapezoidal	Titan	4 [ ]

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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Characteristics	Example Varieties	Note
<b>5.6 Fruit: color (32)</b>		
yellow	Golden Bliss, Sungold	1 [ ]
orange	Valentina	2 [ ]
light red	Qualicum, Vision	3 [ ]
medium red	Diamond Jubilee, Pearl	4 [ ]
dark red	Bella, BP 1	5 [ ]
purple	Glen Coe, Royalty	6 [ ]
blackish	Black Jewel	7 [ ]
<b>5.7 Time of beginning of fruit ripening on previous year's cane (40)</b>		
very early		1 [ ]
very early to early	ABB 122, Malling Freya	2 [ ]
early	Advabereen, Lupita	3 [ ]
early to medium	Adelita, Advarberimar	4 [ ]
medium	Advabertwee, Radiance	5 [ ]
medium to late	Mayfair, Satine	6 [ ]
late	Grandeur, Octavia	7 [ ]
late to very late	Lowden	8 [ ]
very late	Augusta	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 <b>similar</b> variety(ies)	Describe the expression of the characteristic(s) for <b>your</b> candidate variety
<i>Example</i>	<i>Fruit: firmness</i>	<i>very soft</i>	<i>firm</i>
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 photograph of the variety displaying its main distinguishing feature(s), should accompany the Technical Questionnaire. The photograph will provide a visual illustration of the candidate variety which supplements the information provided in the Technical Questionnaire.

The key points to consider when taking a photograph of the candidate variety are:

- Indication of the date and geographic location
- Correct labeling (breeder's reference)
- Good quality printed photograph (minimum 10 cm x 15 cm) and/or sufficient resolution electronic format version (minimum 960 x 1280 pixels)"

Further guidance on providing photographs with the Technical Questionnaire is available in document TGP/7 "Development of Test Guidelines", Guidance Note 35 (<http://www.upov.int/tgp/en/>).

[The link provided may be deleted by members of the Union when developing authorities' own test guidelines.]

Bearing type

mainly on previous year's canes in summer:

both on previous year's canes in summer  
and on current season's canes in autumn:

mainly on current season's canes in autumn:

Virus status

The variety is free from all known viruses as follows:  
(indicate from which viruses)

The plant material is virus tested:  
(indicate against which viruses)

The virus status is unknown

# 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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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.

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".

.....

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]