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

Geneva

### BLUEBERRY

UPOV Code(s): VACCI\_AMC;  
VACCI\_ANG; VACCI\_CAN; VACCI\_CAV;  
VACCI\_CDA; VACCI\_COR; VACCI\_DAR;  
VACCI\_FOR; VACCI\_MYD; VACCI\_MYR;  
VACCI\_SIM; VACCI\_ULI; VACCI\_VIR

*Vaccinium angustifolium* x *Vaccinium*  
*myrsinites* x *Vaccinium corymbosum*;  
*Vaccinium angustifolium* Aiton;  
Hybrids between *Vaccinium corymbosum*  
and *Vaccinium angustifolium*;  
*Vaccinium corymbosum* x *Vaccinium*  
*angustifolium* x *Vaccinium virgatum*;  
Hybrids between *Vaccinium corymbosum*  
L. and *Vaccinium darrowii* Camp;  
*Vaccinium corymbosum* L.;  
*Vaccinium darrowii* Camp;  
*Vaccinium formosum* Andrews;  
*Vaccinium myrtilloides* Michx.;  
*Vaccinium myrtillus* L.;  
*Vaccinium simulatum* Small;  
*Vaccinium uliginosum* L.;  
*Vaccinium virgatum* Aiton

### GUIDELINES

#### FOR THE CONDUCT OF TESTS

#### FOR DISTINCTNESS, UNIFORMITY AND STABILITY

\* 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.]

Alternative names: \*

Botanical name	English	French	German	Spanish
<i>Vaccinium angustifolium</i> x <i>Vaccinium myrsinites</i> x <i>Vaccinium corymbosum</i>				
<i>Vaccinium angustifolium</i> Aiton, <i>V. angustifolium</i> var. <i>hypolasium</i> Fernald, <i>V. angustifolium</i> var. <i>laevifolium</i> House, <i>V. angustifolium</i> var. <i>nigrum</i> (Alph. Wood) Dole, <i>V. brittonii</i> Porter ex E. P. Bicknell, <i>V. lamarckii</i> Camp, <i>V. pensylvanicum</i> Lam., <i>V. pensylvanicum</i> var. <i>nigrum</i> Alph. Wood	Lowbush Blueberry, Upland lowbush blueberry			
Hybrids between <i>Vaccinium corymbosum</i> and <i>Vaccinium</i> <i>angustifolium</i> , <i>V.angustifolium</i> x <i>V.corymbosum</i> , <i>V.corymbosum</i> x <i>V.angustifolium</i>				
<i>Vaccinium corymbosum</i> x <i>Vaccinium angustifolium</i> x <i>Vaccinium virgatum</i>				
Hybrids between <i>Vaccinium corymbosum</i> L. and <i>Vaccinium darrowii</i> Camp				
<i>Vaccinium corymbosum</i> L., <i>V. atlanticum</i> E. P. Bicknell, <i>V. constablaei</i> A. Gray	Blueberry, High Bush Blueberry	Myrtille, Myrtille en Corymbe, Myrtille américaine, Myrtille arbustive	Amerikanische Heidelbeere, Kulturheidelbeere	Arándano americano
<i>Vaccinium darrowii</i> Camp	Darrow's blueberry, Darrow's evergreen blueberry			
<i>Vaccinium formosum</i> Andrews, <i>V. australe</i> Small	Swamp Highbush Blueberry			
<i>Vaccinium myrtilloides</i> Michx., <i>V. canadense</i> Kalm ex Richardson	Canada blueberry, Sourtop blueberry, Velvetleaf blueberry		Kanadische Heidelbeere	
<i>Vaccinium myrtillus</i> L., <i>V. yatabei</i> Makino	Bilberry, Blueberry, Whinberry, Whortleberry	Myrtille	Blaubeere, Heidelbeere	Arándano, Mirtillo
<i>Vaccinium simulatum</i> Small				
<i>Vaccinium uliginosum</i> L., <i>Vaccinium gaultherioides</i> Bigelow, <i>Vaccinium</i> <i>occidentale</i> A. Gray	Bog Blueberry, Bog Bilberry	Airelle de marécages	Moosbeere, Rauschbeere	
<i>Vaccinium virgatum</i> Aiton, <i>V. amoenum</i> Aiton, <i>V. ashei</i> J. M. Reade	Rabbit-eye blueberry, Southern black blueberry			

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.

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1. Subject of these Test Guidelines

- 1.1 These Test Guidelines apply to all varieties of *Vaccinium angustifolium* x *Vaccinium myrsinites* x *Vaccinium corymbosum*, *Vaccinium angustifolium* Aiton, hybrids between *Vaccinium corymbosum* and *Vaccinium angustifolium*, *Vaccinium corymbosum* x *Vaccinium angustifolium* x *Vaccinium virgatum*, hybrids between *Vaccinium corymbosum* L. and *Vaccinium darrowii* Camp, *Vaccinium corymbosum* L., *Vaccinium darrowii* Camp, *Vaccinium formosum* Andrews, *Vaccinium myrtilloides* Michx., *Vaccinium myrtilillus* L., *Vaccinium simulatum* Small, *Vaccinium uliginosum* L. and *Vaccinium virgatum* Aiton.
- 1.2 Guidance on the use of Test Guidelines for interspecific hybrids that are not explicitly covered by Test Guidelines is provided in document TGP/13 “Guidance for New Types and Species”.
- 1.3 In the case of ornamental varieties, in particular, it may be necessary to use additional characteristics or additional states of expression to those included in the Table of Characteristics in order to examine Distinctness, Uniformity and Stability.

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.
- 2.3 The minimum quantity of plant material, to be supplied by the applicant, should be:
- 5 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 The growing cycle is considered to be the duration of a single growing season, beginning with bud burst (flowering and/or vegetative), flowering and fruit harvest and concluding when the following dormant period ends with the swelling of new season buds.

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*

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.

3.4 *Test Design*

- 3.4.1 Each test should be designed to result in a total of at least 5 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 3.

#### 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 5 plants, no off-types are 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: vigor (characteristic 1)
- (b) Plant: growth habit (characteristic 2)
- (c) One-year-old shoot: color (characteristic 3)
- (d) Inflorescence: density (characteristic 20)
- (e) Plant: fruiting type (characteristic 32)
- (f) Time of beginning of flowering on one-year-old shoot (characteristic 34)
- (g) Time of beginning of flowering on current season's shoot (characteristic 35)
- (h) Time of beginning of fruit ripening on one-year-old shoot (characteristic 36)
- (i) Time of beginning of fruit ripening on current season's shoot (characteristic 37)

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:

<i>State</i>	<i>Note</i>
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:

<i>State</i>	<i>Note</i>
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

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

Blueberry varieties require different numbers of chilling hours to ensure a sufficient amount of flowering and fruit set. Chilling hours are the number of hours below 45 °F (7 °C).

(H) - example variety with high chilling requirements (greater than 750 hours)

(L) - example variety with low chilling requirements (less than 600 hours)

#### 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)-(d) 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
1. (*)	QN	VG	(+)	(a)				
	<b>Plant: vigor</b>		<b>Plante : vigueur</b>		<b>Pflanze: Wuchsstärke</b>	<b>Planta: vigor</b>		
	very weak		très faible		sehr schwach	muy débil		1
	weak		faible		schwach	débil	Dolce Blue (L)	2
	medium		moyenne		mittel	medio	DrisBlueSeven (L)	3
	strong		forte		stark	fuerte	Bluecrop (H)	4
	very strong		très forte		sehr stark	muy fuerte	Vernon (L)	5
2. (*)	QN	VG		(a)				
	<b>Plant: growth habit</b>		<b>Plante : port</b>		<b>Pflanze: Wuchsform</b>	<b>Planta: hábito de crecimiento</b>		
	upright		dressé		aufrecht	erecta	Cargo (H), Ivanhoe (H), Spartan (H)	1
	semi-upright		demi-dressé		halbaufrecht	semierecta	Bluetta (H), Draper (H)	2
	spreading		étalé		breitwüchsig	extendida	Blue Ribbon (H), Jersey (H)	3
3. (*)	PQ	VG		(a)				
	<b>One-year-old shoot: color</b>		<b>Rameau d'un an : couleur</b>		<b>Einjähriger Trieb: Farbe</b>	<b>Rama de un año: color</b>		
	green		vert		grün	verde	Puru (H)	1
	reddish yellow		jaune rougeâtre		rötlichgelb	amarillo rojizo	Heerma (H)	2
	greenish red		rouge verdâtre		grünlichrot	rojo verdoso	Reka (H)	3
	greyish red		rouge grisâtre		gräulichrot	rojo grisáceo	Berkeley (H)	4
	dark red		rouge foncé		dunkelrot	rojo oscuro	Aron (H)	5
	reddish brown		brun rougeâtre		rötlichbraun	marrón rojizo	Earliblue (H)	6
4.	QN	VG	(+)	(a)				
	<b>One-year-old shoot: length of internode</b>		<b>Rameau d'un an : longueur de l'entre-nœud</b>		<b>Einjähriger Trieb: Internodienlänge</b>	<b>Rama de un año: longitud del entrenudo</b>		
	short		court		kurz	corto	DrisBlueTen (H)	1
	medium		moyen		mittel	medio	DrisBlueFifteen (H)	3
	long		long		lang	largo	DrisBlueSeven (L)	5
5. (*)	QN	MG/VG		(b)				
	<b>Leaf: length</b>		<b>Feuille : longueur</b>		<b>Blatt: Länge</b>	<b>Hoja: longitud</b>		
	short		courte		kurz	corta	Darrow (H)	3
	medium		moyenne		mittel	media	Bluecrop (H), Patriot (H)	5
	long		longue		lang	larga	Berkeley (H), Collins (H), Toro (H)	7

	English		français		deutsch		español		Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
6.	QN	MG/VG	(b)							
	<b>Leaf: width</b>		<b>Feuille : largeur</b>		<b>Blatt: Breite</b>		<b>Hoja: anchura</b>			
	narrow		étroite		schmal		estrecha		Emil (H), Heerma (H), Putte (H)	3
	medium		moyenne		mittel		media		Ama (H), Bluecrop (H)	5
	broad		large		breit		ancha		Berkeley (H), Collins (H)	7
7. (*)	QN	MG/VG	(+)	(b)						
	<b>Leaf: ratio length/width</b>		<b>Feuille : rapport longueur/largeur</b>		<b>Blatt: Verhältnis Länge/Breite</b>		<b>Hoja: relación longitud/anchura</b>			
	low		bas		klein		baja		Gretha (H)	3
	medium		moyen		mittel		media		Patriot (H)	5
	high		élevé		groß		alta		Heerma (H)	7
8. (*)	PQ	VG	(+)	(b)						
	<b>Leaf: shape</b>		<b>Feuille : forme</b>		<b>Blatt: Form</b>		<b>Hoja: forma</b>			
	lanceolate		lancéolée		lanzettlich		lanceolada		Weymouth (H)	1
	ovate		ovale		eiförmig		oval		Puru (H)	2
	elliptic		elliptique		elliptisch		elíptica		Earliblue (H)	3
	oblong		oblongue		rechteckig		oblonga		Berkeley (H), Bluetta (H), Jersey (H)	4
9. (*)	PQ	VG	(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>			
	yellow		jaune		gelb		amarillo		Geerdens (H)	1
	light green		vert clair		hellgrün		verde claro		Earliblue (H)	2
	medium green		vert moyen		mittelgrün		verde medio		Berkeley (H), Toro (H)	3
	dark green		vert foncé		dunkelgrün		verde oscuro		Darrow (H), Weymouth (H)	4
10. (*)	QL	VG	(b)							
	<b>Leaf: margin</b>		<b>Feuille : bord</b>		<b>Blatt: Rand</b>		<b>Hoja: margen</b>			
	entire		entier		ganzrandig		entero		Blueray (H), Jersey (H)	1
	serrate		dentelé		gesägt		serrado		Brigitta (H), Rancocas (H)	2
11.	QN	VG	(b)							
	<b>Leaf: glaucosity on upper side</b>		<b>Feuille : glaucescence de la face supérieure</b>		<b>Blatt: Bereifung der Oberseite</b>		<b>Hoja: glaucescencia del haz</b>			
	absent or weak		absente ou faible		fehlend oder gering		ausente o leve		Puru (H), Reka (H)	1
	medium		moyenne		mittel		media		Dolce Blue (L), Magnolia (L)	2
	strong		forte		stark		intensa		Maru (L), Takahe (L)	3

	English		français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
<b>12.</b>	<b>QN</b>	<b>VG</b>	<b>(c)</b>				
	<b>Flower bud: anthocyanin coloration</b>	<b>Bourgeon : pigmentation anthocyanique</b>	<b>Blütenknospe: Anthocyanfärbung</b>	<b>Botón floral: pigmentación antociánica</b>			
	absent or very weak	absente ou très faible	fehlend oder sehr gering	ausente o muy leve	Cipria (L), Hortblue Poppins (H), Palmetto (L)	1	
	weak	faible	gering	leve	Hele (H)	2	
	medium	moyenne	mittel	media	Patriot (H)	3	
	strong	forte	stark	intensa	Bluecrop (H)	4	
	very strong	très forte	sehr stark	muy intensa	Brigitta (H), Collins (H)	5	
<b>13.</b>	<b>QN</b>	<b>MS/VG</b>	<b>(+)</b>	<b>(c)</b>			
	<b>Inflorescence: length</b>	<b>Inflorescence : longueur</b>	<b>Blütenstand: Länge</b>	<b>Inflorescencia: longitud</b>			
	short	courte	kurz	corta	Bluetta (H), Collins (H)	1	
	medium	moyenne	mittel	media	Duke (H), Earliblue (H)	2	
	long	longue	lang	larga	Berkeley (H), Bluecrop (H)	3	
<b>14.</b>	<b>PQ</b>	<b>VG</b>	<b>(+)</b>	<b>(c)</b>			
	<b>Flower: shape of corolla</b>	<b>Fleur : forme de la corolle</b>	<b>Blüte: Form der Krone</b>	<b>Flor: forma de la corola</b>			
	globose	globuleuse	kugelförmig	globosa	EB 12-19 (L), Farthing (L)	1	
	ellipsoid	ellipsoïde	ellipsoid	elipsoidal	DrisBlueSeven	2	
	cylindric	cylindrique	zylindrisch	cilíndrica	Reka (H)	3	
	ovoid	ovoïde	eiförmig	ovoidal		4	
	urceolate	urcéolée	urnenförmig	urceolada	Maru (L)	5	
	campanulate	campanulée	glockenförmig	acampanada	Magnolia (L), Scintilla (L), Velluto Blue (H), Victoria (L)	6	
<b>15.</b>	<b>QN</b>	<b>VG</b>	<b>(c)</b>				
	<b>Flower: size of corolla tube</b>	<b>Fleur : taille du tube de la corolle</b>	<b>Blüte: Größe der Kronenröhre</b>	<b>Flor: tamaño del tubo de la corola</b>			
	small	petit	klein	pequeño	Blueray (H)	1	
	medium	moyen	mittel	medio	Heerma (H)	3	
	large	grand	groß	grande	Collins (H)	5	

	English		français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
<b>16.</b>	<b>PQ</b>	<b>VG</b>	<b>(c)</b>				
	<b>Flower: color of corolla tube</b>	<b>Fleur : couleur du tube de la corolle</b>	<b>Blüte: Farbe der Kronenröhre</b>	<b>Flor: color del tubo de la corola</b>			
	white	blanc	weiß	blanco	Bluetta (H), Ridley 1607 (L)	1	
	whitish green	vert blanchâtre	weißlichgrün	verde blanquecino	Blueray (H), Ridley 1403 (L)	2	
	whitish yellow	jaune blanchâtre	weißlichgelb	amarillo blanquecino	Berkeley (H)	3	
	whitish red	rouge blanchâtre	weißlichrot	rojo blanquecino	FL 96-43 (L), Tifblue (L)	4	
<b>17.</b>	<b>QN</b>	<b>VG</b>	<b>(c)</b>				
	<b>Flower: anthocyanin coloration of corolla tube on outer side</b>	<b>Fleur : pigmentation anthocyanique du tube de la corolle sur la face externe</b>	<b>Blüte: Anthocyanfärbung der Kronenröhre der Außenseite</b>	<b>Flor: pigmentación antocianica del tubo de la corola en la cara externa</b>			
	absent or very weak	absente ou très faible	fehlend oder sehr gering	ausente o muy leve	Camellia (L)	1	
	weak	faible	gering	leve	Ama (H)	2	
	medium	moyenne	mittel	media	Gretha (H)	3	
	strong	forte	stark	intensa	Bluecrop (H), Sunshine Blue (L)	4	
	very strong	très forte	sehr stark	muy intense		5	
<b>18.</b>	<b>QN</b>	<b>VG</b>	<b>(+)</b>	<b>(c)</b>			
	<b>Flower: conspicuousness of ridges on corolla tube</b>	<b>Fleur : netteté des cannelures sur le tube de la corolle</b>	<b>Blüte: Ausprägung der Rippen an der Kronenröhre</b>	<b>Flor: visibilidad de las aristas del tubo de la corola</b>			
	absent or weak	absente ou faible	fehlend oder schwach	ausentes o poco visibles	Ventura (L)	1	
	medium	moyenne	mittel	medianamente visibles	Atlantic (H), Camellia (L)	2	
	strong	forte	stark	muy visibles	Bluejay (H), Corona (L), FL 02-40 (L)	3	
<b>19.</b>	<b>PQ</b>	<b>VG</b>	<b>(c)</b>				
	<b>Flower: color of receptacle</b>	<b>Fleur : couleur du réceptacle</b>	<b>Blüte: Farbe des Blütenbodens</b>	<b>Flor: color del receptáculo</b>			
	green	vert	grün	verde		1	
	pink	rose	rosa	rosa		2	
	red	rouge	rot	rojo		3	
	blue	bleu	blau	azul		4	
<b>20. (*)</b>	<b>QN</b>	<b>VG</b>	<b>(d)</b>				
	<b>Infructescence: density</b>	<b>Infrutescence : densité</b>	<b>Fruchtstand: Dichte</b>	<b>Infrutescencia: densidad</b>			
	sparse	lâche	locker	laxa	Rahi (L)	3	
	medium	moyenne	mittel	media	Toro (H)	5	
	dense	dense	dicht	densa	Tifblue (L)	7	

	English		français		deutsch		español		Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
21.	QN	VG	(+)							
	<b>Unripe fruit: intensity of green color</b>		<b>Fruit non mûr : intensité de la couleur verte</b>		<b>Unreife Frucht: Intensität der Grünfärbung</b>		<b>Fruto no maduro: intensidad del color verde</b>			
	light		claire		hell		claro		Heerma (H)	1
	medium		moyenne		mittel		medio		Ama (H)	3
	dark		foncée		dunkel		oscuro		Berkeley (H)	5
22. (*)	QN	VG	(d)							
	<b>Fruit: size</b>		<b>Fruit : taille</b>		<b>Frucht: Größe</b>		<b>Fruto: tamaño</b>			
	very small		très petit		sehr klein		muy pequeño		Emil (H), Putte (H), ZF08-095 (L)	1
	small		petit		klein		pequeño		Ama (H)	3
	medium		moyen		mittel		medio		Concord (H), Emerald (L)	5
	large		grand		groß		grande		Darrow (H), FL05-627 (L)	7
23. (*)	QN	VG	(+)	(d)						
	<b>Fruit: shape in longitudinal section</b>		<b>Fruit : forme en section longitudinale</b>		<b>Frucht: Form im Längsschnitt</b>		<b>Fruto: forma en sección longitudinal</b>			
	elliptic		elliptique		elliptisch		elíptico		Northland (H)	1
	circular		circulaire		kreisförmig		circular		Bluecrop (H), Jersey (H)	2
	oblate		aplatis		breitrund		achatado		Earliblue (H)	3
24.	QN	VG	(d)							
	<b>Fruit: attitude of sepals</b>		<b>Fruit : port des sépales</b>		<b>Frucht: Haltung der Kelchblätter</b>		<b>Fruto: porte de los sépalos</b>			
	incurved		incurvé		aufgebogen		incurvados		Delite (L)	1
	straight		droit		gerade		rectos		Powderblue (L)	2
	reflexed		récurvé		zurückgebogen		recurvados		Tifblue (L)	3
25.	QN	VG	(+)	(d)						
	<b>Fruit: diameter of calyx basin</b>		<b>Fruit : diamètre de la cuvette du calice</b>		<b>Frucht: Durchmesser der Kelchhöhle</b>		<b>Fruto: diámetro de la cavidad calicinal</b>			
	small		petit		klein		pequeño		Blueray (H)	1
	medium		moyen		mittel		medio		Bluecrop (H)	3
	large		grand		groß		grande		Darrow (H)	5
26.	QN	VG	(+)	(d)						
	<b>Fruit: depth of calyx basin</b>		<b>Fruit : profondeur de la cuvette du calice</b>		<b>Frucht: Tiefe der Kelchhöhle</b>		<b>Fruto: profundidad de la cavidad calicinal</b>			
	absent or shallow		absente ou peu profonde		fehlend oder flach		ausente o poco profunda		Clockwork (H), Collins (H), Nelson (H), Olympia (H)	1
	medium		moyenne		mittel		medianamente profunda		Blueray (H)	2
	deep		profonde		tief		profunda		Denis (H), Jersey (H)	3

	English		français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
27. (*)	QN	VG	(d)				
	<b>Fruit: intensity of bloom</b>	<b>Fruit : intensité de la pruine</b>	<b>Frucht: Intensität der Bereifung</b>	<b>Fruto: intensidad de la pruina</b>			
	absent or very weak	absente ou très faible	fehlend oder sehr gering	ausente o muy leve	Goldtraube (H), ZF08-095 (L)	1	
	weak	faible	gering	leve	Gretha (H)	3	
	medium	moyenne	mittel	media	Ama (H), Bluetta (H)	5	
	strong	forte	stark	intensa	Darrow (H)	7	
28. (*)	PQ	VG	(+) (d)				
	<b>Fruit: color of skin</b>	<b>Fruit : couleur de l'épiderme</b>	<b>Frucht: Farbe der Schale</b>	<b>Fruto: color de la piel</b>			
	pink	rose	rosa	rosa	Pink Lemonade (L)	1	
	blue red	bleu rouge	blaurrot	rojo azulado	Delite (L)	2	
	light blue	bleu clair	hellblau	azul claro	Berkeley (H)	3	
	medium blue	bleu moyen	mittelblau	azul medio	Patriot (H)	4	
	dark blue	bleu foncé	dunkelblau	azul oscuro	Heerma (H)	5	
	blackish blue	bleu noirâtre	schwärzlichblau	azul negruzco	Emil (H), Freda (H), Putte (H)	6	
29.	QN	MG/VG	(+) (d)				
	<b>Fruit: firmness</b>	<b>Fruit : fermeté</b>	<b>Frucht: Festigkeit</b>	<b>Fruto: firmeza</b>			
	very soft	très mou	sehr weich	muy blando		1	
	soft	mou	weich	blando	Elliott (H), Hortblue Poppins (H)	2	
	medium	intermédiaire	mittel	medio	O'Neal (L)	3	
	firm	ferme	fest	firme	Duke (H)	4	
	very firm	très ferme	sehr fest	muy firme	Rahi (L)	5	
30.	QN	VG	(+) (d)				
	<b>Fruit: sweetness</b>	<b>Fruit : goût sucré</b>	<b>Frucht: Süße</b>	<b>Fruto: dulzor</b>			
	low	faible	gering	leve	Bluetta (H)	1	
	medium	moyen	mittel	medio	Collins (H)	3	
	high	fort	hoch	intenso	Goldtraube (H)	5	
31.	QN	MG/VG	(+) (d)				
	<b>Fruit: acidity</b>	<b>Fruit : acidité</b>	<b>Frucht: Säure</b>	<b>Fruto: acidez</b>			
	low	faible	gering	leve	Gretha (H)	1	
	medium	moyenne	mittel	media	Darrow (H)	3	
	high	élevée	hoch	intensa	Ascorba (H), Bluecrop (H)	5	

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
<b>32. (*)</b>	<b>QL</b> <b>VG</b>					
	<b>Plant: fruiting type</b>	<b>Plante : type de fructification</b>	<b>Pflanze: Fruchtungstyp</b>	<b>Planta: tipo de fructificación</b>		
	on one-year-old shoots only	seulement sur des rameaux d'un an	nur an einjährigen Trieben	solo en ramas de un año	Darrow (H), Patriot (H)	1
	on one-year-old and current season shoots	sur des rameaux d'un an et des rameaux en croissance	an einjährigen Trieben und an Jahrestrieben	en ramas de un año y en ramas del año en curso	Burlington (H), Concord (H)	2
<b>33. (*)</b>	<b>QN</b> <b>MG/VG</b>	<b>(+)</b>				
	<b>Time of beginning of vegetative growth</b>	<b>Époque du début de la croissance végétative</b>	<b>Zeitpunkt des Beginns des vegetativen Wachstums</b>	<b>Época de inicio del crecimiento vegetativo</b>		
	early	précoce	früh	temprana	Patriot (H), Weymouth (H)	3
	medium	moyenne	mittel	media	Bluecrop (H)	5
	late	tardive	spät	tardía	Blueray (H)	7
<b>34. (*)</b>	<b>QN</b> <b>MG/VG</b>	<b>(+)</b>				
	<b>Time of beginning of flowering on one-year-old shoot</b>	<b>Époque du début de la floraison sur des rameaux d'un an</b>	<b>Zeitpunkt des Blühbeginns am einjährigen Trieb</b>	<b>Época de inicio de la floración en las ramas de un año</b>		
	very early	très précoce	sehr früh	muy temprana	Patriot (H)	1
	early	précoce	früh	temprana	Weymouth (H)	3
	medium	moyenne	mittel	media	Berkeley (H)	5
	late	tardive	spät	tardía	Darrow (H)	7
	very late	très tardive	sehr spät	muy tardía	Jersey (H)	9
<b>35. (*)</b>	<b>QN</b> <b>MG/VG</b>	<b>(+)</b>				
	<b>Time of beginning of flowering on current season's shoot</b>	<b>Époque du début de la floraison sur les rameaux en croissance</b>	<b>Zeitpunkt des Blühbeginns am Jahrestrieb</b>	<b>Época de inicio de la floración en las ramas del año en curso</b>		
	early	précoce	früh	temprana	O'Neal (L)	3
	medium	moyenne	mittel	media	Bluecrop (H)	5
	late	tardive	spät	tardía		7
<b>36. (*)</b>	<b>QN</b> <b>MG/VG</b>	<b>(+)</b>				
	<b>Time of beginning of fruit ripening on one-year-old shoot</b>	<b>Époque du début de la maturation des fruits sur les rameaux d'un an</b>	<b>Zeitpunkt des Beginns der Fruchtreife am einjährigen Trieb</b>	<b>Época de inicio de la madurez de los frutos en las ramas de un año</b>		
	very early	très précoce	sehr früh	muy temprana	Bluetta (H)	1
	early	précoce	früh	temprana	Blueray (H)	3
	medium	moyenne	mittel	media	Heerma (H)	5
	late	tardive	spät	tardía	Darrow (H)	7
	very late	très tardive	sehr spät	muy tardía	Elizabeth (H)	9

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
<b>37. (*)</b>	<b>QN</b>	<b>MG/VG</b>	<b>(+)</b>			
	<b>Time of beginning of fruit ripening on current season's shoot</b>	<b>Époque du début de la maturation des fruits sur les rameaux en croissance</b>	<b>Zeitpunkt des Beginns der Fruchtreife am Jahrestrieb</b>	<b>Época de inicio de la madurez de los frutos en las ramas del año en curso</b>		
	early	précoce	früh	temprana	O'Neal (L)	3
	medium	moyenne	mittel	media	JU83 (L)	5
	late	tardive	spät	tardía		7



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 on unpruned bushes in the dormant season.
- (b) Observations should be made on fully developed leaves.
- (c) Observations should be made at the beginning of flowering.
- (d) Observations should be made on physiologically ripe fruits.

8.2 *Explanations for individual characteristics*

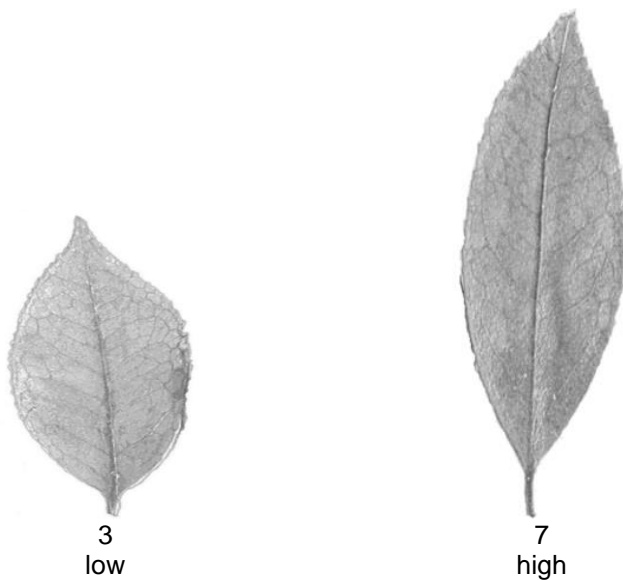
Ad. 1: Plant: vigor

The plant vigor should be considered as the overall abundance of vegetative growth.

Ad. 4: One-year-old shoot: length of internode

Observation should be made on upper half of shoot.

Ad. 7: Leaf: ratio length/width



Ad. 8: Leaf: shape

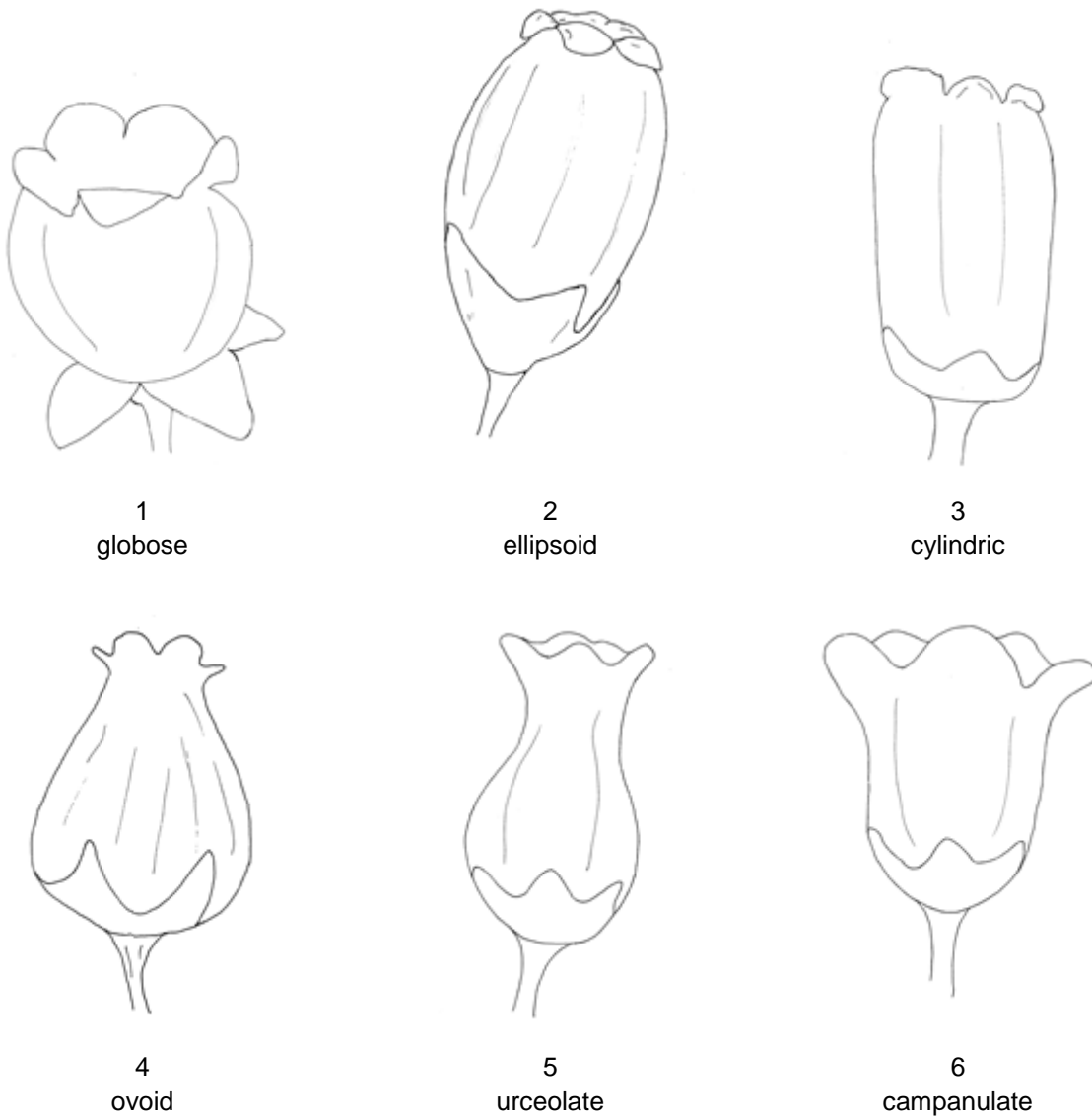


Ad. 13: Inflorescence: length

Observations should be made on middle third of shoot.



Ad. 14: Flower: shape of corolla



Ad. 18: Flower: conspicuousness of ridges on corolla tube

Observations should be made on outer side.

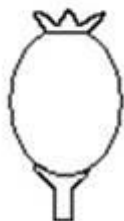


a: ridging

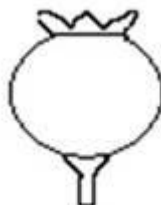
Ad. 21: Unripe fruit: intensity of green color

Observations should be made on green fruit with bloom.

Ad. 23: Fruit: shape in longitudinal section



1  
elliptic

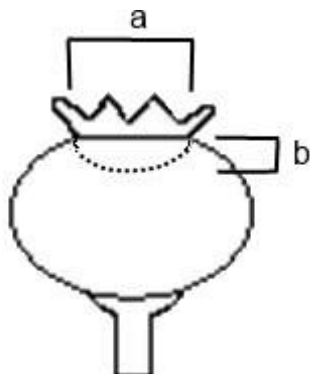


2  
circular



3  
oblate

Ad. 25: Fruit: diameter of calyx basin



a: diameter of calyx basin  
b: depth of calyx basin

Ad. 26: Fruit: depth of calyx basin

See Ad. 25

Ad. 28: Fruit: color of skin

Observations should be made after removal of bloom.

Ad. 29: Fruit: firmness

Firmness should be determined by hand in comparison to the example varieties, or measured using a penetrometer.

Ad. 30: Fruit: sweetness

Sweetness should be observed by tasting in comparison to the example varieties.

Ad. 31: Fruit: acidity

Acidity is determined by titration of titratable acids or by tasting.

Ad. 33: Time of beginning of vegetative growth

The time of beginning of vegetative growth is when the first vegetative buds begin to burst.

Ad. 34: Time of beginning of flowering on one-year-old shoot

The time of beginning of flowering is when 10% of the flowers are fully open.

Ad. 35: Time of beginning of flowering on current season's shoot

See Ad. 34

Ad. 36: Time of beginning of fruit ripening on one-year-old shoot

The time of beginning of fruit ripening is when 10% of the fruits are ripe.

Ad. 37: Time of beginning of fruit ripening on current season's shoot

See Ad. 36

9. Literature

Ebert, G., 2005: Anbau von Heidelbeeren und Cranberries. Ulmer Verlag, Stuttgart, DE.

Liebster, G., 1961: Die Kulturheidelbeere. Parey Verlag, Berlin und Hamburg, DE.

Rejman, A., 1994: Pomologia. PWRiL, Warszawa, PL.

Rejman, A., Pliszka, K., 1988: Borówka wysoka. PWRiL, Warszawa, PL.

Sękowski, B., 1993: Pomologia systematyczna. PWN, Warszawa, PL.

Sorge, P., 1984: Beerenobstsorten. J. Neumann-Neudamm, Melsungen, DE.

Trehane, J., 2004: Blueberries, Cranberries, and Other Vacciniums. Royal Horticultural Society, Plant Collector Guide. Timber Press, Cambridge, GB.

10. Technical Questionnaire

TECHNICAL QUESTIONNAIRE		Page {x} of {y}	Reference Number:
			Application date: (not to be filled in by the applicant)
<b>TECHNICAL QUESTIONNAIRE</b> to be completed in connection with an application for plant breeders' rights			
1.	Subject of the Technical Questionnaire		
1.1.1	Botanical name	<i>Vaccinium angustifolium</i> x <i>Vaccinium myrsinites</i> x <i>Vaccinium corymbosum</i>	[ ]
1.1.2	Common name		
1.2.1	Botanical name	<i>Vaccinium angustifolium</i> Aiton	[ ]
1.2.2	Common name	Lowbush Blueberry, Upland lowbush blueberry	
1.3.1	Botanical name	Hybrids between <i>Vaccinium corymbosum</i> and <i>Vaccinium angustifolium</i>	[ ]
1.3.2	Common name		
1.4.1	Botanical name	<i>Vaccinium corymbosum</i> x <i>Vaccinium angustifolium</i> x <i>Vaccinium virgatum</i>	[ ]
1.4.2	Common name		
1.5.1	Botanical name	Hybrids between <i>Vaccinium corymbosum</i> L. and <i>Vaccinium darrowii</i> Camp	[ ]
1.5.2	Common name		
1.6.1	Botanical name	<i>Vaccinium corymbosum</i> L.	[ ]
1.6.2	Common name	Blueberry, High Bush Blueberry	
1.7.1	Botanical name	<i>Vaccinium darrowii</i> Camp	[ ]
1.7.2	Common name	Darrow's blueberry, Darrow's evergreen blueberry	
1.8.1	Botanical name	<i>Vaccinium formosum</i> Andrews	[ ]
1.8.2	Common name	Swamp Highbush Blueberry	
1.9.1	Botanical name	<i>Vaccinium myrtilloides</i> Michx.	[ ]
1.9.2	Common name	Canada blueberry; Sourtop blueberry; Velvetleaf blueberry	
1.10.1	Botanical name	<i>Vaccinium myrtillus</i> L.	[ ]
1.10.2	Common name	Bilberry, Blueberry, Whinberry, Whortleberry	
1.11.1	Botanical name	<i>Vaccinium simulatum</i> Small	[ ]
1.11.2	Common name		

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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1.12.1	Botanical name	<input type="text" value="Vaccinium uliginosum L., Vaccinium gaultherioides Bigelow, Vaccinium occidentale A. Gray"/>	[ ]
1.12.2	Common name	<input type="text" value="Bog Blueberry, Bog Bilberry"/>	
1.13.1	Botanical name	<input type="text" value="Vaccinium virgatum Aiton"/>	[ ]
1.13.2	Common name	<input type="text" value="Rabbit-eye blueberry, Southern black blueberry"/>	

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"/>



#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))

(please state known parent varieties)  
(.....) 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)

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) 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
<b>5.1 Plant: vigor</b> <b>(1)</b>		
very weak		1 [ ]
weak	Dolce Blue (L)	2 [ ]
medium	DrisBlueSeven (L)	3 [ ]
strong	Bluecrop (H)	4 [ ]
very strong	Vernon (L)	5 [ ]
<b>5.2 Plant: growth habit</b> <b>(2)</b>		
upright	Cargo (H), Ivanhoe (H), Spartan (H)	1 [ ]
semi-upright	Bluetta (H), Draper (H)	2 [ ]
spreading	Blue Ribbon (H), Jersey (H)	3 [ ]
<b>5.3 One-year-old shoot: color</b> <b>(3)</b>		
green	Puru (H)	1 [ ]
reddish yellow	Heerma (H)	2 [ ]
greenish red	Reka (H)	3 [ ]
greyish red	Berkeley (H)	4 [ ]
dark red	Aron (H)	5 [ ]
reddish brown	Earliblue (H)	6 [ ]
<b>5.4 Infructescence: density</b> <b>(20)</b>		
very sparse		1 [ ]
very sparse to sparse		2 [ ]
sparse	Rahi (L)	3 [ ]
sparse to medium		4 [ ]
medium	Toro (H)	5 [ ]
medium to dense		6 [ ]
dense	Tifblue (L)	7 [ ]
dense to very dense		8 [ ]
very dense		9 [ ]

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Characteristics	Example Varieties	Note
<b>5.5 Fruit: color of skin</b> <b>(28)</b>		
pink	Pink Lemonade (L)	1 [ ]
blue red	Delite (L)	2 [ ]
light blue	Berkeley (H)	3 [ ]
medium blue	Patriot (H)	4 [ ]
dark blue	Heerma (H)	5 [ ]
blackish blue	Emil (H), Freda (H), Putte (H)	6 [ ]
<b>5.6 Plant: fruiting type</b> <b>(32)</b>		
on one-year-old shoots only	Darrow (H), Patriot (H)	1 [ ]
on one-year-old and current season shoots	Burlington (H), Concord (H)	2 [ ]
<b>5.7 Time of beginning of flowering on one-year-old shoot</b> <b>(34)</b>		
very early	Patriot (H)	1 [ ]
very early to early		2 [ ]
early	Weymouth (H)	3 [ ]
early to medium		4 [ ]
medium	Berkeley (H)	5 [ ]
medium to late		6 [ ]
late	Darrow (H)	7 [ ]
late to very late		8 [ ]
very late	Jersey (H)	9 [ ]
<b>5.8 Time of beginning of flowering on current season's shoot</b> <b>(35)</b>		
very early		1 [ ]
very early to early		2 [ ]
early	O'Neal (L)	3 [ ]
early to medium		4 [ ]
medium	Bluecrop (H)	5 [ ]
medium to late		6 [ ]
late		7 [ ]
late to very late		8 [ ]
very late		9 [ ]

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Characteristics	Example Varieties	Note
<b>5.9 Time of beginning of fruit ripening on one-year-old shoot (36)</b>		
very early	Bluetta (H)	1 [ ]
very early to early		2 [ ]
early	Blueray (H)	3 [ ]
early to medium		4 [ ]
medium	Heerma (H)	5 [ ]
medium to late		6 [ ]
late	Darrow (H)	7 [ ]
late to very late		8 [ ]
very late	Elizabeth (H)	9 [ ]
<b>5.10 Time of beginning of fruit ripening on current season's shoot (37)</b>		
very early		1 [ ]
very early to early		2 [ ]
early	O'Neal (L)	3 [ ]
early to medium		4 [ ]
medium	JU83 (L)	5 [ ]
medium to late		6 [ ]
late		7 [ ]
late to very late		8 [ ]
very late		9 [ ]

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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: size</i>	<i>small</i>	<i>medium</i>

Comments:

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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.]

7.3.1 What are the chilling requirements for the variety? (also indicate number of chilling hours)

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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]