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

Geneva

DRAFT

## SWEET CHERRY

UPOV Code(s): PRUNU\_AVI

*Prunus avium* (L.) L.

## GUIDELINES

## FOR THE CONDUCT OF TESTS

## FOR DISTINCTNESS, UNIFORMITY AND STABILITY

*prepared by an expert from France**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:\*

Botanical name	English	French	German	Spanish
<i>Prunus avium</i> (L.) L., <i>Cerasus avium</i> (L.) Moench	Sweet Cherry	Bigarreaux, Cerisier doux	Süßkirsche	Cerezo dulce, Mollar

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/187/2 *Prunus* Rootstocks

TG/230/1 Duke Cherry, Sour Cherry

\* 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.]

TABLE OF CONTENTS	PAGE
1. SUBJECT OF THESE TEST GUIDELINES.....	<a href="#">3</a>
2. MATERIAL REQUIRED.....	<a href="#">3</a>
3. METHOD OF EXAMINATION.....	<a href="#">3</a>
3.1 Number of Growing Cycles.....	<a href="#">3</a>
3.2 Testing Place.....	<a href="#">3</a>
3.3 Conditions for Conducting the Examination.....	<a href="#">3</a>
3.4 Test Design.....	<a href="#">4</a>
3.5 Additional Tests.....	<a href="#">4</a>
4. ASSESSMENT OF DISTINCTNESS, UNIFORMITY AND STABILITY.....	<a href="#">4</a>
4.1 Distinctness.....	<a href="#">4</a>
4.2 Uniformity.....	<a href="#">5</a>
4.3 Stability.....	<a href="#">5</a>
5. GROUPING OF VARIETIES AND ORGANIZATION OF THE GROWING TRIAL.....	<a href="#">6</a>
6. INTRODUCTION TO THE TABLE OF CHARACTERISTICS.....	<a href="#">6</a>
6.1 Categories of Characteristics.....	<a href="#">6</a>
6.2 States of Expression and Corresponding Notes.....	<a href="#">6</a>
6.3 Types of Expression.....	<a href="#">6</a>
6.4 Example Varieties.....	<a href="#">6</a>
6.5 Legend.....	<a href="#">7</a>
7. TABLE OF CHARACTERISTICS/TABLEAU DES CARACTÈRES/MERKMALSTABELLE/TABLA DE CARACTERES.....	<a href="#">8</a>
8. EXPLANATIONS ON THE TABLE OF CHARACTERISTICS.....	<a href="#">22</a>
8.1 Explanations covering several characteristics.....	<a href="#">22</a>
8.2 Explanations for individual characteristics.....	<a href="#">22</a>
8.3 Phenological growth stages of sweet cherry according to the BBCH scale.....	<a href="#">27</a>
8.4 Other names of example varieties.....	<a href="#">28</a>
9. LITERATURE.....	<a href="#">29</a>
10. TECHNICAL QUESTIONNAIRE.....	<a href="#">30</a>

1. Subject of these Test Guidelines

These Test Guidelines apply to all varieties of *Prunus avium* (L.) L. except for varieties used only as rootstock varieties (see TG/187/2).

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 one-year old grafts or budwood for grafting.

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

3 trees or 3 budsticks or 3 dormant shoots for grafting, sufficient to propagate 3 trees.

The rootstock to be used is specified by the competent authority.

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 trees 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 The optimum stage of development for the assessment of each characteristic is indicated by a number in the Table of Characteristics. The stages of development denoted by each number are described in Chapter 8.3

- 3.3.3 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 3 trees.
- 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 3 plants or parts of plants taken from each of 3 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 at least 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 The assessment of uniformity for should be according to the recommendations for cross-pollinated varieties in the General Introduction.
- 4.2.4 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 3 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 seed or 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) Fruit: size (characteristic 22)
  - (b) Fruit: shape in ventral view (characteristic 26)
  - (c) Fruit: ground color of skin (characteristic 34)
  - (d) Fruit: main color of flesh (characteristic 39)
  - (e) Fruit: firmness (characteristic 42)
  - (f) Time of beginning of flowering (characteristic 48)
  - (g) Time of beginning of fruit ripening (characteristic 49)
- 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			
	<b>Name of characteristics in English</b>			<b>Nom du caractère en français</b>		<b>Name des Merkmals auf Deutsch</b>	<b>Nombre del carácter en español</b>		
	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)-(e) See Explanations on the Table of Characteristics in Chapter 8.1
- 7 Growth stage key See Explanations on the Table of Characteristics in Chapter 8.3

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	(+)		81			
	<b>Tree: vigor</b>		<b>Arbre : vigueur</b>		<b>Baum: Wuchsstärke</b>	<b>Árbol: vigor</b>		
	very weak		très faible		sehr gering	muy débil		1
	weak		faible		gering	débil	Frisco, PA2UNIBO	2
	medium		moyenne		mittel	medio	Early Korwik, Glenred	3
	strong		forte		stark	fuerte	Louis, Rosilam	4
	very strong		très forte		sehr stark	muy fuerte	Babelle, Regina	5
2. (*)	PQ	VG	(+)	(a)	BBCH00			
	<b>Tree: habit</b>		<b>Arbre : port</b>		<b>Baum: Wuchsform</b>	<b>Árbol: hábito</b>		
	upright		dressé		aufrecht	erecto	Baïa, Lapins, Melitopol'skaya rannyaya	1
	semi-upright		demi-dressé		halbaufrecht	semierecto	Burlat, Napoléon	2
	spreading		étalé		breitwüchsig	extendido	Fertard, Sumtare, Vera	3
	drooping		pendant		überhängend	colgante	Annabella, Vanda	4
3. (*)	QN	VG	(+)	(a)	BBCH00			
	<b>Tree: density of branching</b>		<b>Arbre : densité de la ramification</b>		<b>Baum: Dichte der Verzweigung</b>	<b>Árbol: densidad de la ramificación</b>		
	very sparse		très lâche		sehr locker	muy laxa	Baïa	1
	sparse		lâche		locker	laxa	Merton Glory, Rainier	2
	medium		moyenne		mittel	media	Firelam, Hedelfinger Riesenkirsche	3
	dense		dense		dicht	densa	Glenoia	4
	very dense		très dense		sehr dicht	muy densa	Alex, Emma, Fertard	5
4.	QN	MG/VG		(a)	BBCH00			
	<b>One-year-old shoot: number of lenticels</b>		<b>Rameau d'un an : nombre de lenticelles</b>		<b>Einjähriger Trieb: Anzahl Lentizellen</b>	<b>Rama de un año: número de lenticelas</b>		
	very few		très petit		sehr gering	muy bajo	Ferdouze, Karl	1
	few		petit		gering	bajo	Kordia, PA4UNIBO, Sam	2
	medium		moyen		mittel	medio	Hedelfinger Riesenkirsche, Pacific Red, Van	3
	many		élevé		hoch	alto	Krupnoplodnaya, Querfurter Königs-kirsche, Rosilam	4
	very many		très élevé		sehr hoch	muy alto	Cambrina, Royal Bailey	5



	English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
5.	QN	VG	(+)	(a)	00			
	<b>One-year-old shoot: position of vegetative bud in relation to shoot</b>		<b>Rameau d'un an : position du bourgeon végétatif par rapport au rameau</b>		<b>Einjähriger Trieb: Position der vegetativen Knospe im Verhältnis zum Trieb</b>	<b>Rama de un año: posición de la yema vegetativa en relación con la rama</b>		
	adpressed		apprimée		anliegend	adpresa	Duroni 3	1
	erect		dressée		aufrecht	erecta	Rivedel	2
	semi-erect		demi-dressée		halbaufrecht	semierecta	Magar, Rita, Sunburst	3
6.	QN	VG			BBCH33			
	<b>Young shoot: intensity of anthocyanin coloration of apex</b>		<b>Jeune rameau : intensité de la pigmentation anthocyanique de l'apex</b>		<b>Junger Trieb: Intensität der Anthocyanfärbung des Apex</b>	<b>Rama joven: intensidad de la pigmentación antociánica del ápice</b>		
	absent or very weak		absente ou très faible		fehlend oder sehr gering	ausente o muy débil	Drogans Gelbe Knorpelkirsche, Royal Helen	1
	weak		faible		gering	débil	Emma, Merton Glory, Van	2
	medium		moyenne		mittel	media	Areko, Napoléon, Rebekka	3
	strong		forte		stark	fuerte	Namosa, Nimba, Rivan	4
	very strong		très forte		sehr stark	muy fuerte	Aida, Big Star, Merton Heart, Pat	5
7.	QN	VG			BBCH33			
	<b>Young shoot: pubescence of apex</b>		<b>Jeune rameau : pilosité de l'apex</b>		<b>Junger Trieb: Behaarung des Apex</b>	<b>Rama joven: pubescencia del ápice</b>		
	absent or very weak		absente ou très faible		fehlend oder sehr gering	ausente o muy débil	PA2UNIBO	1
	weak		faible		gering	débil	Habunt, Hedelfinger Riesenkirsche, Van	2
	medium		moyenne		mittel	media	Henriette, Kassins Frühe	3
	strong		forte		stark	fuerte	Burlat, Early Rivers, Rocket	4
	very strong		très forte		sehr stark	muy fuerte	Rosie, Swing	5
8.	PQ	VG	(+)		BBCH50			
	<b>Fruiting spur: shape of apex</b>		<b>Brindille fructifère : forme de l'apex</b>		<b>Buketttrieb: Form des Apex</b>	<b>Espolón frutal: forma del ápice</b>		
	acute		aigue		spitz	aguda	Bedel, Santina	1
	obtuse		obtusee		stumpf	obtuse	Magar, Rivedel	2
	rounded		arrondi		abgerundet	redondeada	Duroni 3, Van	3

	English		français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
9.	QN	MG/VG	(b)	BBCH39			
	Leaf blade: length		Limbe : longueur	Blattspreite: Länge	Limbo: longitud		
	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	Noire de Meched	2
	short		courte	kurz	corta	Cambrina, Sumtare, Szomolyai fekete	3
	short to medium		courte à moyenne	kurz bis mittel	corta a media	Hedelfinger Riesenkirsche	4
	medium		moyenne	mittel	media	Karl, Napoléon, Vanda	5
	medium to long		moyenne à longue	mittel bis lang	media a larga	PC7146-8, Starking Hardy Giant	6
	long		longue	lang	larga	Feria, Merton Crane	7
	long to very long		longue à très longue	lang bis sehr lang	larga a muy larga	Babelle, Rubilam	8
	very long		très longue	sehr lang	muy larga	Habunt	9
10.	QN	MG/VG	(b)	BBCH39			
	Leaf blade: width		Limbe : largeur	Blattspreite: Breite	Limbo: anchura		
	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	Saint Genis Laval	2
	narrow		étroite	schmal	estrecha	Sumtare, Sylvia	3
	narrow to medium		étroite à moyenne	schmal bis mittel	estrecha a media	Royal Marie	4
	medium		moyenne	mittel	media	Guillaume, Poisdal, Stella	5
	medium to broad		moyenne à large	mittel bis breit	media a ancha	PA2UNIBO	6
	broad		large	breit	ancha	Badacsonyi, Germersdorfi 45, Glenoia, Merton Crane	7
	broad to very broad		large à très large	breit bis sehr breit	ancha a muy ancha	PA1UNIBO, Rosilam	8
	very broad		très large	sehr breit	muy ancha	Babelle	9

	English		français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
11. (*)	QN	MG/VG	(b)	BBCH39			
	<b>Leaf blade: ratio length/width</b>		<b>Limbe : rapport longueur/largeur</b>	<b>Blattspreite: Verhältnis Länge/Breite</b>	<b>Limbo: relación longitud/anchura</b>		
	very low		très bas	sehr klein	muy baja		1
	very low to low		très bas à bas	sehr klein bis klein	muy baja a baja	Emma	2
	low		bas	klein	baja	Badacsonyi, Hudson	3
	low to medium		bas à moyen	klein bis mittel	baja a media	Rocket	4
	medium		moyen	mittel	media	Bing, Merton Crane, Walter	5
	medium to high		moyen à élevé	mittel bis groß	media a alta	Glenoia	6
	high		élevé	groß	alta	Hedelfinger Riesenkirsche, Poisdal, Sylvia, Vanda	7
	high to very high		élevé à très élevé	groß bis sehr groß	alta a muy alta	Karl, PC7146-8	8
	very high		très élevé	sehr groß	muy alta	Babelle, Habunt	9
12.	QN	VG	(b)	BBCH39			
	<b>Leaf blade: intensity of green color of upper side</b>		<b>Limbe : intensité de la couleur verte de la face supérieure</b>	<b>Blattspreite: Intensität der Grünfärbung der Oberseite</b>	<b>Limbo: intensidad del color verde del haz</b>		
	very light		très claire	sehr hell	muy clara	Bigarreau d'Or	1
	light		claire	hell	clara	Cambrina, Sumtare	2
	medium		moyenne	mittel	media	Napoléon, PA5UNIBO, Vanda	3
	dark		foncée	dunkel	oscura	Burlat, Royal Hazel	4
	very dark		très foncée	sehr dunkel	muy oscura	Big Star, Frisco	5
13.	QN	MG/VG	(b)	BBCH39			
	<b>Leaf: length of petiole</b>		<b>Feuille : longueur du pétiole</b>	<b>Blatt: Länge des Blattstiels</b>	<b>Hoja: longitud del peciolo</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	Nimba, Redlam	2
	short		courte	kurz	corta	Sylvia, Van	3
	short to medium		courte à moyenne	kurz bis mittel	corta a media	Glenoia	4
	medium		moyenne	mittel	media	Sam, Stella	5
	medium to long		moyenne à longue	mittel bis lang	media a larga	PA6UNIBO	6
	long		longue	lang	larga	Badacsonyi, Merton Crane	7
	long to very long		longue à très longue	lang bis sehr lang	larga a muy larga	13N0770, PA5UNIBO	8
	very long		très longue	sehr lang	muy larga		9

	English		français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
14. (*)	QN	MG/VG	(b)	BBCH39			
	Leaf: ratio length of blade / length of petiole		Feuille : rapport longueur du limbe / longueur du pétiole	Blatt: Verhältnis Länge der Blattspreite / Länge des Blattstiels	Hoja: relación longitud del limbo / longitud del peciolo		
	very low		très bas	sehr klein	muy baja		1
	very low to low		très bas à bas	sehr klein bis klein	muy baja a baja	Tardif de Vignola	2
	low		bas	klein	baja	Badacsonyi, Lambert, PC7146-8	3
	low to medium		bas à moyen	klein bis mittel	baja a media	Big Star	4
	medium		moyen	mittel	media	Burlat, Sam	5
	medium to high		moyen à élevé	mittel bis groß	media a alta	Rosie	6
	high		élevé	groß	alta	Hedelfinger Riesenkirsche, Stella	7
	high to very high		élevé à très élevé	groß bis sehr groß	alta a muy alta	Tip Top	8
	very high		très élevé	sehr groß	muy alta	Redlam	9
15.	QN	VG	(b)	BBCH39			
	Leaf: predominant number of nectaries		Feuille : nombre prédominant de nectaires	Blatt: überwiegende Anzahl von Nektarien	Hoja: número predominante de nectarios		
	two		deux	zwei	dos	Narana	1
	more than two		plus de deux	mehr als zwei	más de dos	ZAI107CZ	2
16.	PQ	VG	(b)	BBCH39			
	Leaf: color of nectaries		Feuille : couleur des nectaires	Blatt: Farbe der Nektarien	Hoja: color de los nectarios		
	greenish yellow		jaune verdâtre	grünlichgelb	amarillo verdoso	Drogans Gelbe Knorpelkirsche, Firelam, Van	1
	orange yellow		jaune orangé	orange gelb	amarillo anaranjado	Hudson, Reverchon, Royal Hazel	2
	red		rouge	rot	rojo	Burlat, Early Rivers, Gernersdorfer 45, Glenoia, Sylvia	3
	purple		pourpre	purpur	púrpura	Gege, Paulus, Rocket	4
17.	QN	VG	(+)	BBCH 65			
	Anthers: position in relation to the top of petals		Anthères : position par rapport au sommet des pétales	Anthere: Position im Verhältnis zur Spitze der Blütenblätter	Anteras: posición en relación con el extremo superior de los pétalos		
	below		au-dessous	unterhalb	por debajo	Burlat, PA7UNIBO	1
	same level		au même niveau	gleiche Höhe	mismo nivel	Redlam	2
	above		au-dessus	oberhalb	por encima	Royal Hazel	3

	English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
18.	QN	VG	(+)		BBCH 65			
	<b>Stigma: position in relation to anthers</b>		<b>Stigmate : position par rapport aux anthères</b>		<b>Narbe: Position im Verhältnis zu den Antheren</b>	<b>Estigma: posición en relación con las anteras</b>		
	below		au-dessous		unterhalb	por debajo	Napoléon, PA6UNIBO	1
	same level		au même niveau		gleiche Höhe	mismo nivel	Tip Top, Van	2
	above		au-dessus		oberhalb	por encima	Burlat, Redlam	3
19.	QN	MG/VG	(+)	(c)	BBCH 65			
	<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
	small		petit		klein	pequeño	Annus, Szomolyai fekete	2
	medium		moyen		mittel	medio	Sylvia, Van	3
	large		grand		groß	grande	Aida, Burlat	4
	very large		très grand		sehr groß	muy grande	Rosilam, Walter	5
20.	PQ	MG	(+)	(c)	BBCH 65			
	<b>Flower: shape of petal</b>		<b>Fleur : forme du pétale</b>		<b>Blüte: Form des Blütenblattes</b>	<b>Flor: forma del pétalo</b>		
	circular		circulaire		kreisförmig	circular	Kordia, Rosie, Scheider Späte Knorpelkirsche	1
	medium obovate		obovale moyenne		mittel verkehrt eiförmig	oboval media	Burlat, Royal Hazel, Sunburst	2
	broad obovate		obovale large		breit verkehrt eiförmig	oboval ancha	Firelam, Hedelfinger Riesenkirsche, Van	3
21.	QN	VG	(+)	(c)	BBCH 65			
	<b>Flower: arrangement of petals</b>		<b>Fleur : disposition des pétales</b>		<b>Blüte: Anordnung der Blütenblätter</b>	<b>Flor: disposición de los pétalos</b>		
	free		disjointe		freistehend	libre	Burlat, Royal Hazel, Sunburst	1
	intermediate		intermédiaire		mittel	intermedia	Germersdorfi 45, Nimba, Van	2
	overlapping		se recouvrante		überlappend	solapada	Hudson, Royal Edie	3

	English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
22. (*)	QN	MG/VG	(+)	(d)	BBCH87			
	<b>Fruit: size</b>		<b>Fruit : taille</b>		<b>Frucht: Größe</b>	<b>Fruto: tamaño</b>		
	very low		très petite		sehr klein	muy pequenõ	Müncheberger Frühernte, Szomolyai fekete	1
	very low to low		très petite à petite		sehr klein bis klein	muy pequenõ a pequenõ	Cristobalina, Merton Crane	2
	low		petite		klein	pequenõ	Ulster	3
	low to medium		petite à moyenne		klein bis mittel	pequenõ a medio	Alex	4
	medium		moyenne		mittel	medio	Bing, Burlat, Rainier	5
	medium to high		moyenne à grande		mittel bis groß	medio a grande	Belge, Sunburst	6
	high		grande		groß	grande	Folfer, Rosie	7
	high to very high		grande à très grande		groß bis sehr groß	grande a muy grande	Baia, Louis	8
	very high		très grande		sehr groß	muy grande		9
23.	QN	MG/VG	(d), (e)		BBCH87			
	<b>Fruit: height</b>		<b>Fruit : hauteur</b>		<b>Frucht: Höhe</b>	<b>Fruto: altura</b>		
	very short		très courte		sehr niedrig	muy baja	PA1UNIBO, Van	1
	short		courte		niedrig	baja	Burlat, Sunburst	2
	medium		moyenne		mittel	media	Reverchon	3
	large		haute		hoch	alta	Ferdiva, Hedelfinger Riesenkirsche	4
	very large		très haute		sehr hoch	muy alta	Rocket, Summit	5
24.	QN	MG/VG	(d), (e)		BBCH87			
	<b>Fruit: width (in ventral view)</b>		<b>Fruit : largeur (en vue ventrale)</b>		<b>Frucht: Breite (in Bauchansicht)</b>	<b>Fruto: anchura (en vista ventral)</b>		
	very narrow		très étroite		sehr schmal	muy estrecha	Hedelfinger Riesenkirsche	1
	narrow		étroite		schmal	estrecha	Ferdiva, Walter	2
	medium		moyenne		mittel	media	Burlat, Reverchon	3
	broad		large		breit	ancha	Feroni, Summit	4
	very broad		très large		sehr breit	muy ancha	PA6UNIBO, Sunburst	5

	English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
25.	QN	MG/VG	(d), (e)		BBCH87			
	<b>Fruit: ratio height/width (in ventral view)</b>		<b>Fruit : rapport hauteur/largeur</b>		<b>Frucht: Verhältnis Höhe/Breite (in Bauchansicht)</b>	<b>Fruto: relación altura/anchura (en vista ventral)</b>		
	very low		très bas		sehr klein	muy baja	Masdel, Sunburst	1
	low		bas		klein	baja		2
	medium		moyen		mittel	media	Rocket, Summit	3
	high		élevé		groß	alta		4
	very high		très élevé		sehr groß	muy alta	Ferdiva, Hedelfinger Riesenkirsche	5
26. (*)	PQ	VG	(+) (d), (e)		BBCH87			
	<b>Fruit: shape in ventral view</b>		<b>Fruit : forme en vue ventrale</b>		<b>Frucht: Form in Bauchansicht</b>	<b>Fruto: forma en vista ventral</b>		
	oblate		arrondie-aplatie		breitrund	achatada	Alex, Burlat, Glenoia	1
	reniform		réniforme		nierenförmig	reniforme	Big Star, Royal Edie, Van, Vera	2
	cordate		cordée		herzförmig	cordada	Louis, PA7UNIBO, Summit	3
	broad elliptic		elliptique large		breit ulliptisch	elíptica ancha	Ferdiva, Hedelfinger Riesenkirsche, Walter	4
	circular		circulaire		kreisförmig	circular	Reverchon	5
27.	PQ	VG	(+) (d)		BBCH87			
	<b>Fruit: shape at stalk end</b>		<b>Fruit : forme à l'extrémité du pédoncule</b>		<b>Frucht: Form am Stielende</b>	<b>Fruto: forma al extremo peduncular</b>		
	circular		circulaire		kreisförmig	circular	Duroni 3, Hamid	1
	elliptic		elliptique		elliptisch	elíptica	Pacific Red, Swing	2
	angular		anguleuse		eckig	angular	PA7UNIBO	3
28.	PQ	VG	(+) (d)		BBCH87			
	<b>Fruit: shape of base in ventral view</b>		<b>Fruit : forme de la base en vue ventrale</b>		<b>Frucht: Form der Basis in Bauchansicht</b>	<b>Fruto: forma de la base en vista ventral</b>		
	truncate or weakly cordate		tronquée ou faiblement cordée		gerade oder leicht herzförmig	truncada o débilmente cordada	Duroni 3	1
	medium cordate		moyennement cordée		mittel herzförmig	moderadamente cordada	Burlat, Van	2
	strongly cordate		fortement cordée		stark herzförmig	fuertemente cordada	PA7UNIBO, Summit	3

	English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
29.	PQ	VG	(+)	(d)	BBCH87			
	Fruit: shape of apex in dorsal view		Fruit : forme de l'apex en vue dorsale		Frucht: Form des Apex in Rückenansicht	Fruto: forma del ápice en vista dorsal		
	concave		convexe		konkav	cóncava	Fertile, Redlam	1
	flat		plate		flach	plana	Henriette, Van	2
	convex		convave		konvex	convexa	PA6UNIBO, Sunburst	3
30.	QN	VG		(d), (e)	BBCH87			
	Fruit: suture		Fruit : suture		Frucht: Naht	Fruto: sutura		
	absent or slightly conspicuous		absente ou peu nette		fehlend oder schwach ausgeprägt	ausente o poco conspicua	Klara, Rosalolam	1
	moderately conspicuous		modérément nette		mäßig ausgeprägt	moderadamente conspicua	Cambrina, Rocket, Stella	2
	strongly conspicuous		très nette		stark ausgeprägt	fuertemente conspicua	Betti, Regina, SPC106	3
31. (*)	QN	MG/VG		(d)	BBCH87			
	Fruit: length of stalk		Fruit : longueur du pédoncule		Frucht: Länge des Stiels	Fruto: longitud del pedúnculo		
	very short		très courte		sehr kurz	muy corta	Folfer, Walter	1
	very short to short		très courte à courte		sehr kurz bis kurz	muy corta a corta	Rubilam, Van	2
	short		courte		kurz	corta	Babelle, Burlat, Royal Edie, Szomolyai fekete	3
	short to medium		courte à moyenne		kurz bis mittel	corta a media	Duroni 3, Frisco	4
	medium		moyenne		mittel	media	Hedelfinger Riesenkirsche, Henriette, Summit	5
	medium to long		moyenne à longue		mittel bis lang	media a larga	Regina, SPC106, Sunburst	6
	long		longue		lang	larga	Belge, Kordia, Noire de Meched	7
	long to very long		longue à très longue		lang bis sehr lang	larga a muy larga	Hâtive de Bâle, Vanda	8
	very long		très longue		sehr lang	muy larga	Delflash, Louis	9
32.	QN	MG/VG		(d)	BBCH87			
	Fruit: thickness of stalk		Fruit : épaisseur du pédoncule		Frucht: Dicke des Stiels	Fruto: grosor del pedúnculo		
	very thin		très fine		sehr dünn	muy delgado	PA6UNIBO	1
	thin		fine		dünn	delgado	Ferdiva, Hedelfinger Riesenkirsche, Kordia	2
	medium		moyenne		mittel	medio	Germersdorfi 45, Sunburst, Vanda	3
	thick		épaisse		dick	grueso	Lalastar, Van	4
	very thick		très épaisse		sehr dick	muy grueso	Black Star, Folfer	5



	English		français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
33.	QN	VG	(d)	BBCH87			
	<b>Fruit: adherence to stalk</b>		<b>Fruit : adhérence au pédoncule</b>	<b>Frucht: Anhaften am Stiel</b>	<b>Fruto: adherencia al pedúnculo</b>		
	absent or weak		absente ou faible	fehlend oder gering	ausente o débil	ZAI107CZ	1
	medium		moyenne	mittel	media	Pacific Red, ZAI89CZ	2
	strong		forte	stark	fuerte	Brooks, Redlam	3
34. (*)	PQ	MG/VG	(d)	BBCH87			
	<b>Fruit: ground color of skin</b>		<b>Fruit : couleur de fond de l'épiderme</b>	<b>Frucht: Grundfarbe der Haut</b>	<b>Fruto: color de fondo de la epidermis</b>		
	yellow		jaune	gelb	amarillo	Bigarreau d'Or , Dönnissens Gelbe Knorpelkirsche	1
	orange red		rouge orangé	orangerot	rojo anaranjado		2
	light red		rouge clair	hellrot	rojo claro	Krupnoplodnaya	3
	red		rouge	rot	rojo	Alex, Sunburst	4
	brown red		brun rouge	braunrot	rojo parduzco	Burlat, Kordia, Lapins	5
	dark red		rouge foncé	dunkelrot	rojo oscuro	Hedelfinger Riesenkirsche, Stella	6
	blackish		noirâtre	schwärzlich	negruzco	Annabella, Knauffs Schwarze, Namosa	7
35. (*)	QN	VG	(d)	BBCH87			
	<b>Fruit: relative area of over color</b>		<b>Fruit : surface relative de la couleur du lavis</b>	<b>Frucht: relative Fläche der Deckfarbe</b>	<b>Fruto: zona relativa del color de fondo</b>		
	absent or very small		absente ou très petite	fehlend oder sehr klein	ausente o muy pequeña	Bigarreau d'Or	1
	small		petite	klein	pequeña	Napoléon	2
	medium		moyenne	mittel	media	Rosilam	3
	large		grande	groß	grande	ZAI99CZ	4
	very large		très grande	sehr groß	muy grande	Burlat	5
36.	QN	VG	(d)	BBCH87			
	<b>Fruit: size of lenticels on skin</b>		<b>Fruit : taille des lenticelles sur l'épiderme</b>	<b>Frucht: Größe der Lentizellen auf der Haut</b>	<b>Fruto: tamaño de las lenticelas en la epidermis</b>		
	very small		très petite	sehr klein	muy pequeño	PC7146-8	1
	small		petite	klein	pequeño	Emma, Hedelfinger Riesenkirsche	2
	medium		moyenne	mittel	medio	Frisco, Guillaume	3
	large		grande	groß	grande	Reverchon, Rosie	4
	very large		très grande	sehr groß	muy grande	Royal Hazel	5

	English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
37.	QN	MG/VG	(d)		BBCH87			
	Fruit: number of lenticels on skin		Fruit : nombre de lenticelles sur l'épiderme		Frucht: Anzahl Lentizellen auf der Haut	Fruto: número de lenticelas en la epidermis		
	absent or very few		absent ou très petit		fehlend oder sehr gering	ausente o muy bajo	Henriette, PC7146-8	1
	few		petit		gering	bajo	Burlat, Rita, Swing	2
	medium		moyen		mittel	medio	Babelle, Sunburst	3
	many		élevé		groß	alto	Marmotte, Royal Helen, Vera	4
	very many		très élevé		sehr groß	muy alto	Royal Hazel	5
38.	QN	VG	(+) (d)		BBCH87			
	Fruit: thickness of skin		Fruit : épaisseur de l'épiderme		Frucht: Dicke der Haut	Fruto: grosor de la epidermis		
	thin		fine		dünn	delgado	Glenred, Müncheberger Frühernte, Royal Edie	1
	intermediate		intermédiaire		mittel	intermedio	Big Star, Cambrina, Germersdorfi 45	2
	thick		épaisse		dick	grueso	Carmen, Walter	3
39. (*)	PQ	VG	(+) (d)		BBCH87			
	Fruit: main color of flesh		Fruit : couleur principale de la chair		Frucht: Hauptfarbe des Fleisches	Fruto: color principal de la pulpa		
	whitish		blanchâtre		weißlich	blanquecino	Baïa, Napoléon, Rosilam	1
	yellow		jaune		gelb	amarillo	Cambrina, Dönnissens Gelbe Knorpelkirsche	2
	pink		rose		rosa	rosa	Glenred, Reverchon, Sunburst	3
	medium red		rouge moyen		mittelrot	rojo medio	Germersdorfi 45, Hedelfinger Riesenkirsche, Redlam, Swing	4
	dark red		rouge foncé		dunkelrot	rojo oscuro	Emma, Fernbird 765, Rubin, Szomolyai fekete	5
40.	PQ	VG	(d)		BBCH87			
	Fruit: secondary color of flesh		Fruit : couleur secondaire de la chair		Frucht: Sekundärfarbe des Fleisches	Fruto: color secundario de la pulpa		
	none		aucune		keine	ninguno	Belge, Van	1
	whitish		blanchâtre		weißlich	blanquecino	Fernbird 765	2
	yellow		jaune		gelb	amarillo		3
	pink		rose		rosa	rosa		4
	medium red		rouge moyen		mittelrot	rojo medio		5
	dark red		rouge foncé		dunkelrot	rojo oscuro		6

	English		français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
41.	PQ	VG	(d)	BBCH87			
	Fruit: color of juice		Fruit : couleur du jus	Frucht: Farbe des Saftes	Fruto: color del jugo		
	colorless		incolore	farblos	sin color	Dönnissens Gelbe Knorpelkirsche, Rosilam	1
	light yellow		jaune clair	hellgelb	amarillo claro	13N0770, Baïa, Napoléon	2
	pink		rose	rosa	rosa	Areko, Reverchon, Rocket, Sunburst	3
	red		rouge	rot	rojo	Betti, PA2UNIBO, Sam, Van	4
	purple		pourpre	purpur	púrpura	Emma, Hedelfinger Riesenkirsche, Kavics, PA3UNIBO	5
42. (*)	QN	MG/VG	(d)	BBCH87			
	Fruit: firmness		Fruit : fermeté	Frucht: Festigkeit	Fruto: firmeza		
	very soft		très molle	sehr weich	muy blanda	Early Rivers	1
	soft		molle	weich	blanda	Narana, Sunburst	2
	medium		moyenne	mittel	media	Bedel, Carmen, Emma, Germersdorfer, PC7146-8, Reverchon, Van	3
	firm		ferme	fest	firme	Folfer, Kavics, Kordia, PA2UNIBO, Regina, Sumtare	4
	very firm		très ferme	sehr fest	muy firme	Balrine, Ferdiva	5
43.	QN	MG/VG	(+)	(d)	BBCH87		
	Fruit: sweetness		Fruit : goût sucré	Frucht: Süße	Fruto: sabor dulce		
	low		faible	gering	bajo	Müncheberger Frühernte	1
	low to medium		faible à moyen	gering bis mittel	bajo a medio		2
	medium		moyen	mittel	medio	Burlat, Sunburst	3
	medium to high		moyen à élevé	mittel bis hoch	medio a alto		4
	high		élevé	hoch	alto	Bigarreau d'Or, Kordia	5
44.	QN	MG/VG	(+)	(d)	BBCH87		
	Fruit: acidity		Fruit : acidité	Frucht: Säure	Fruto: acidez		
	low		faible	gering	baja	Burlat, Müncheberger Frühernte	1
	medium		moyenne	gering bis mittel	media	Napoléon, Van	2
	high		élevée	mittel	alta	Sunburst	3

	English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
45. (*)	QN	MG/VG	(+)	(d)	BBCH87			
	<b>Stone: size</b>		<b>Noyau : taille</b>		<b>Stein: Größe</b>	<b>Hueso: tamaño</b>		
	very small		très petite		sehr klein	muy pequeño	Rosie	1
	small		petite		klein	pequeño	Van, ZAI107CZ	2
	medium		moyenne		mittel	medio	Burlat, Early Korwik	3
	large		grande		groß	grande	Feroni, PA7UNIBO	4
	very large		très grande		sehr groß	muy grande	Carmen, Rocket	5
46.	QN	MG/VG		(d)	BBCH87			
	<b>Fruit: ratio size of fruit/size of stone</b>		<b>Fruit : rapport taille du fruit/taille du noyau</b>		<b>Frucht: Verhältnis Größe der Frucht/Größe des Steins</b>	<b>Fruto: relación tamaño del fruto/tamaño del hueso</b>		
	very low		très bas		sehr klein	muy baja	Brooks, Large red	1
	low		bas		klein	baja		2
	medium		moyen		mittel	media	Hedelfinger Riesenkirsche, Techlovan	3
	high		élevé		groß	alta		4
	very high		très élevé		sehr groß	muy alta	Sumtare, Sunburst	5
47. (*)	PQ	VG		(d)	BBCH87			
	<b>Stone: shape in ventral view</b>		<b>Noyau : forme en vue ventrale</b>		<b>Stein: Form in Bauchansicht</b>	<b>Hueso: forma en vista ventral</b>		
	elliptic		elliptique		elliptisch	elíptica	Kordia, Napoléon	1
	broad elliptic		elliptique large		breit elliptisch	elíptica ancha	Rita	2
	circular		circulaire		kreisförmig	circular	Germersdorfi 45, Van	3
	ovate		ovale		eiförmig	oval		4

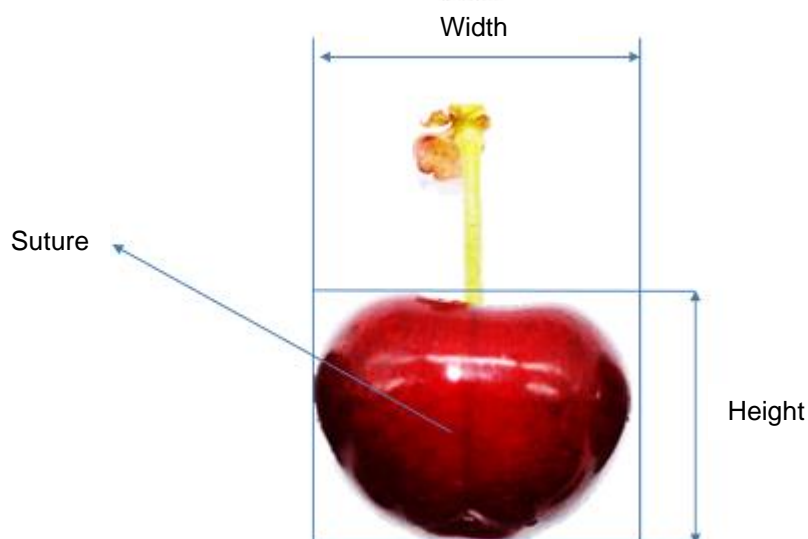
	English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
48. (*)	QN	MG/VG	(+)	BBCH61				
	Time of beginning of flowering		Époque du début de la floraison		Zeitpunkt des Blühbeginns	Época del comienzo de la floración		
	very early		très précoce		sehr früh	muy temprana	Cristobalina, Royal Hazel	1
	very early to early		très précoce à précoce		sehr früh bis früh	muy temprana a temprana	Christiana, Folfer, Müncheberger Frühernte, Panaro 1	2
	early		précoce		früh	temprana	Marmotte, PA2UNIBO, Sumste, Sumtare	3
	early to medium		précoce à moyenne		früh bis mittel	temprana a media	Burlat, Lapins	4
	medium		moyenne		mittel	media	Merton Glory, Napoléon, Royal Helen, Sumele, Sunburst	5
	medium to late		moyenne à tardive		mittel bis spät	media a tardía	Carmen, Karl, Kordia, Rubilam	6
	late		tardive		spät	tardía	Germersdorfi 45, Habunt, Noire de Meched, Regina, Reverchon	7
	late to very late		tardive à très tardive		spät bis sehr spät	tardía a muy tardía	Betti, Duroni 3	8
	very late		très tardive		sehr spät	muy tardía	Hamid, Klara	9
49. (*)	QN	MG/VG	(+)	BBCH87				
	Time of beginning of fruit ripening		Époque du début de la maturité des fruits		Zeitpunkt des Beginns der Fruchtreife	Época del comienzo de la madurez del fruto		
	very early		très précoce		sehr früh	muy temprana	Cristobalina, Ferprime, Hâtive de Bâle, Müncheberger Frühernte	1
	very early to early		très précoce à précoce		sehr früh bis früh	muy temprana a temprana	Nimba, Rivedel	2
	early		précoce		früh	temprana	Burlat, Early Rivers, Panaro 1, Valerij Cskalov	3
	early to medium		précoce à moyenne		früh bis mittel	temprana a media	Bedel, Folfer	4
	medium		moyenne		mittel	media	Fertille, Guillaume, Summit, Sunburst	5
	medium to late		moyenne à tardive		mittel bis spät	media a tardía	Babelle, Duroni 3, Glenoia, PA5UNIBO	6
	late		tardive		spät	tardía	Belge, Hedelfinger Riesenkirsche, Katalin, Klara, Kordia	7
	late to very late		tardive à très tardive		spät bis sehr spät	tardía a muy tardía	Fertard, Regina, Sumtare	8
	very late		très tardive		sehr spät	muy tardía	13S-2009	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 during winter, on trees that have fruited at least once.
- (b) Observations should be made on fully developed leaves on the middle of a fruiting spur in summer.
- (c) Observations should be made on fully developed flowers at the beginning of anther dehiscence.
- (d) Observations should be made at full fruit maturity.
- (e) Ventral view of the fruit



### 8.2 *Explanations for individual characteristics*

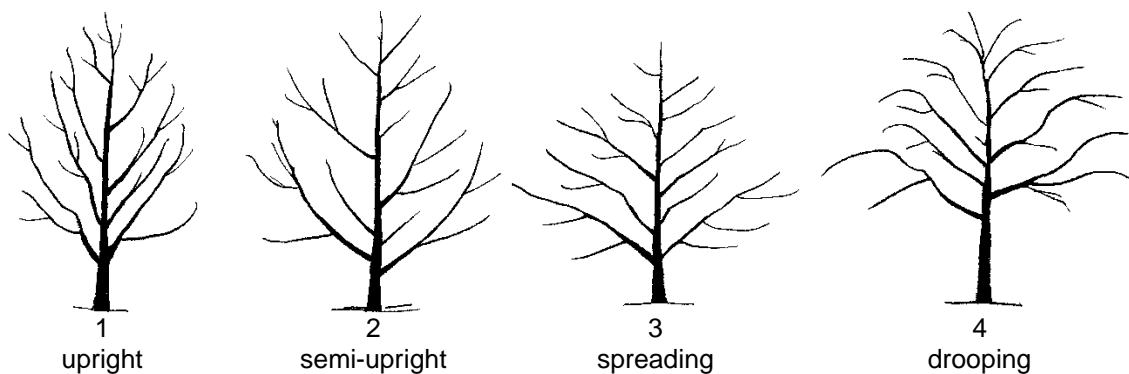
#### Ad. 1: Tree: vigor

The tree vigor should be assessed as the overall abundance of vegetative growth, observed when the tree has reached the peak of vegetative growth.

#### Ad. 2: Tree: habit

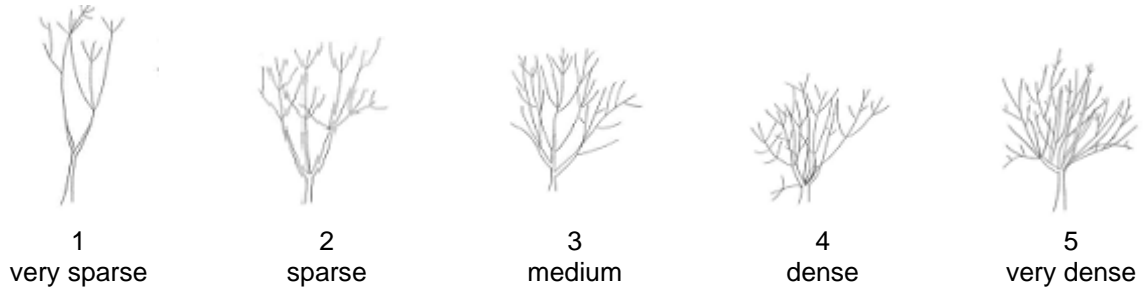
See Ad. 3

Observations should be made during winter after at least one satisfactory crop of fruit.

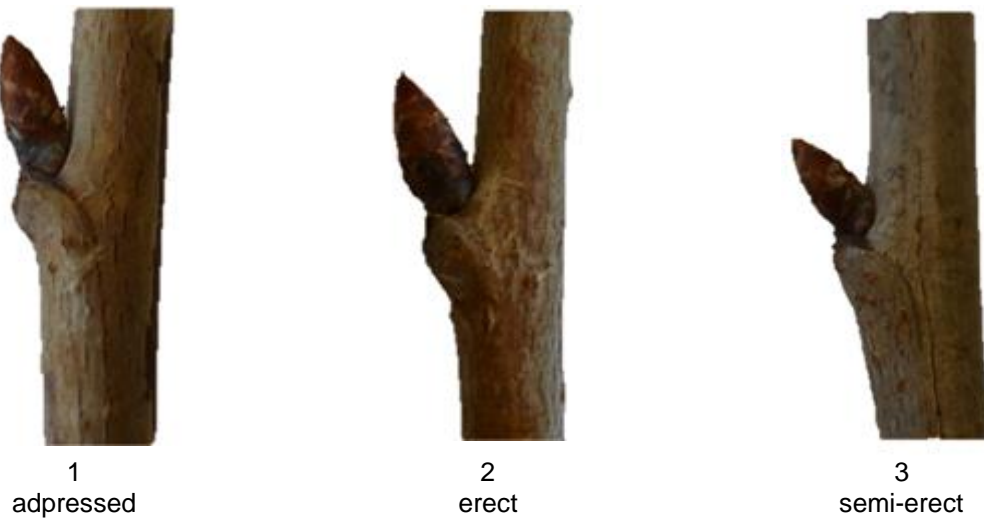


Ad. 3: Tree: density of branching

Observations should be made in winter, on scaffold branches with the density of branching being indicated by the number of lateral branches and shoots, excluding fruiting shoots.



Ad. 5: One-year-old shoot: position of vegetative bud in relation to shoot



Ad. 8: Fruiting spur: shape of apex

The observation should be made on fruiting spur.



Ad. 17: Anthers: position in relation to the top of petals



1  
below



2  
same level



3  
above

Ad. 18: Stigma: position in relation to anthers



1  
below



2  
same level

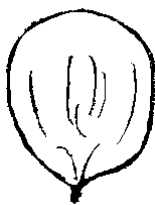


3  
above

Ad. 19: Flower: diameter

Observations or measurements should be made on completely opened flowers with petals pressed into horizontal position.

Ad. 20: Flower: shape of petal



1  
circular

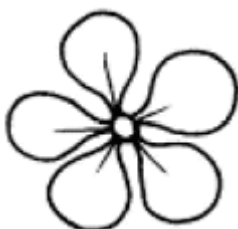


2  
medium obovate



3  
broad obovate

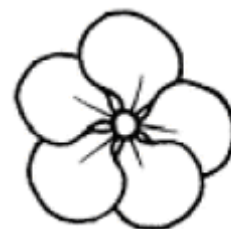
Ad. 21: Flower: arrangement of petals



1  
free



2  
intermediate








3  
overlapping



Ad. 22: Fruit: size

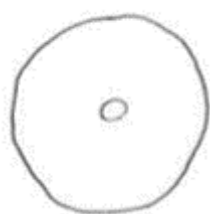
Should be assessed by weighing fruit.

Ad. 26: Fruit: shape in ventral view

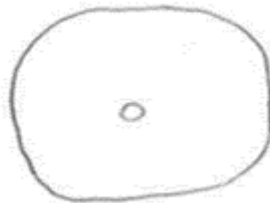
ratio height/width	← broadest part →	
	below middle	at middle
high	 3 cordate	
medium	 2 reniform	 5 circular
low	 1 oblate	 4 broad elliptic

Ad. 27: Fruit: shape at stalk end

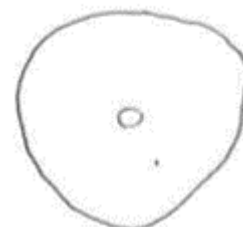
The observation should be done from above.



1  
circular

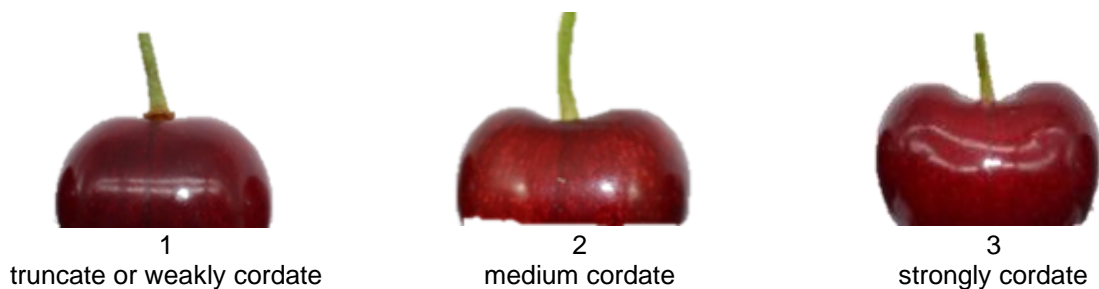


2  
elliptic

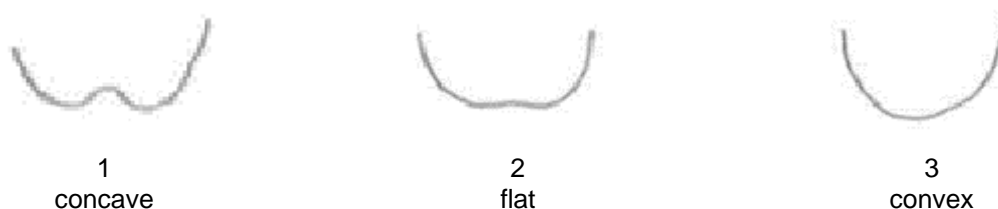


3  
angular

Ad. 28: Fruit: shape of base in ventral view



Ad. 29: Fruit: shape of apex in dorsal view



Ad. 38: Fruit: thickness of skin

Observations should be made by eating the fruits.

Ad. 39: Fruit: main color of flesh

The main color of the flesh is the most extended color of the flesh.

Ad. 43: Fruit: sweetness

The sweetness of the fruit may be observed in degrees Brix.

Ad. 44: Fruit: acidity

The acidity of the fruit may be observed as the titrable acidity in meq 100/ml.

Ad. 45: Stone: size

Observations should be made by weighing or by measuring the stone length and width, or diameter.

Ad. 48: Time of beginning of flowering

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

Ad. 49: Time of beginning of fruit ripening

The time of beginning of fruit ripening is reached when 10% of the fruits are eating ripe. Fruit ripening should be considered.

- 8.3 *Phenological growth stages of sweet cherry according to the BBCH scale (Fadon, E., Herrero M., Rodrigo J., 2015: "Flower development in sweet cherry framed in the BBCH scale". Scientia Horticulturae (192), 141-147)*

BBCH code	Description
Principal growth Stage 0: bud development	
00	Dormancy
01	Beginning bud swelling
03	End of leaf bud swelling
09	Green leaf tips visible
Principal growth Stage 1: leaf development	
10	First leaves separating
11	First leaves unfolded
19	First leaves fully expanded
Principal growth Stage 3: shoot development	
31	Beginning of shoot growth
32	20% of final shoots length
33	30% of final shoots length
3. . .	Stages continuous till. . .
39	90% of final shoots length
Principal growth Stage 5: reproductive development or inflorescence emergence	
50	Dormancy, inflorescence bud closed
51	Inflorescence buds swelling
53	Bud burst
54	Inflorescence enclosed by light green scales
55	Single flower buds visible
56	Flower pedicel elongating
57	Sepals open
59	Balloon
Principal growth Stage 6: flowering	
60	First flowers open
61	Beginning of flowering
62	20% of flowers open
63	30% of flowers open
64	40% of flowers open
65	Full flowering
67	Flower fading
69	End of flowering
Principal growth Stage 7: fruit development	
71	Ovary growing
72	Sepals beginning to fall
73	Second fruit fall
75	50% of final fruit size
76	60% of final fruit size
77	70% of final fruit size
78	80% of final fruit size
79	90% of final fruit size
Principal growth Stage 8: ripening or maturity	
81	Beginning of fruit colouring
85	Colouring advanced
87	Fruit ripe for picking
Principal growth Stage 9: senescence, beginning of dormancy	
91	Shoot growth completed; foliage still fully green
92	Leaves begin to discolour
93	Beginning of leaf fall
95	50% of leaves fallen
97	All leaves fallen



#### 8.4 Other names of example varieties

Denomination	Other names
Areko	Hamid
Early Rivers	Bigarreau précoce de Rivers, Guigne, Franse Vroege; Freinsheimer Schloßkirsche; Frühe Rivers; Heidelberger Schloßkirsche; Kastanka; Kastinky; Lindekens; Precoce de Clies; Rivers Early; Rivers Frühe
Hedelfinger Riesenkirsche	Géant d'Hedelfingen
Kordia	Techlovicka II, Techlo
Magar	Baron
Pico Colorado	Scarlet Peak
Pico Negro	Black Peak
Rosie	Rosie Rainier
Valerij Cskalov	Valery Tschkalov, Valery Chkalov

## 9. Literature

Biologische Bundesanstalt für Land- und Fortswirtschaft (Editor), 1997: Growth Stages of Plants / Entwicklungsstadien von Pflanzen / Estadios de las Plantas / Stades de Développement des Plantes. BBCH-Monograph. Blackwell Wissenschaftsverlag Berlin, DE, Wien, AU.

Fadon, E., Herrero M., Rodrigo J., 2015: Flower development in sweet cherry framed in the BBCH scale. *Scientia Horticulturae* (192), 141-147

Quero-García J., Iezzoni A., Puławska J., Lang G. (eds), 2017: Cherries: Botany, Production and Uses. CABI, Oxfordshire (GB), Boston, US, 533 p.

Webster AD, Looney NE (eds) (1996) Cherries: Crop Physiology, Production and Uses. CABI, Wallingford, GB, 513 p.

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 Botanical name	<i>Prunus avium</i> (L.) L.
1.2 Common name	Sweet Cherry
2. Applicant	
Name	
Address	
Telephone No.	
Fax No.	
E-mail address	
Breeder (if different from applicant)	
3. Proposed denomination and breeder's reference	
Proposed denomination (if available)	
Breeder's reference	

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)

--

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) Budding or grafting

[ ]

(b) 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 Tree: habit (2)</b>		
upright	Baia, Lapins, Melitopol'skaya rannyaya	1 [ ]
semi-upright	Burlat, Napoléon	2 [ ]
spreading	Fertard, Sumtare, Vera	3 [ ]
drooping	Annabella, Vanda	4 [ ]
<b>5.2 Fruit: size (22)</b>		
very low	Müncheberger Frühernte, Szomolyai fekete	1 [ ]
very low to low	Cristobalina, Merton Crane	2 [ ]
low	Ulster	3 [ ]
low to medium	Alex	4 [ ]
medium	Bing, Burlat, Rainier	5 [ ]
medium to high	Belge, Sunburst	6 [ ]
high	Folfer, Rosie	7 [ ]
high to very high	Baia, Louis	8 [ ]
very high		9 [ ]
<b>5.3 Fruit: shape in ventral view (26)</b>		
oblate	Alex, Burlat, Glenoia	1 [ ]
reniform	Big Star, Royal Edie, Van, Vera	2 [ ]
cordate	Louis, PA7UNIBO, Summit	3 [ ]
broad elliptic	Ferdiva, Hedelfinger Riesenkirsche, Walter	4 [ ]
circular	Reverchon	5 [ ]
<b>5.4 Fruit: ground color of skin (34)</b>		
yellow	Bigarreau d'Or, Dönnissens Gelbe Knorpelkirsche	1 [ ]
orange red		2 [ ]
light red	Krupnoplodnaya	3 [ ]
red	Alex, Sunburst	4 [ ]
brown red	Burlat, Kordia, Lapins	5 [ ]
dark red	Hedelfinger Riesenkirsche, Stella	6 [ ]
blackish	Annabella, Knauffs Schwarze, Namosa	7 [ ]

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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Characteristics	Example Varieties	Note
<b>5.5 Fruit: main color of flesh (39)</b>		
whitish	Baïa, Napoléon, Rosilam	1 [ ]
yellow	Cambrina, Dönnissens Gelbe Knorpelkirsche	2 [ ]
pink	Glenred, Reverchon, Sunburst	3 [ ]
medium red	Germersdorfi 45, Hedelfinger Riesenkirsche, Redlam, Swing	4 [ ]
dark red	Emma, Fernbird 765, Rubin, Szomolyai fekete	5 [ ]
<b>5.6 Fruit: firmness (42)</b>		
very soft	Early Rivers	1 [ ]
soft	Narana, Sunburst	2 [ ]
medium	Bedel, Carmen, Emma, Germersdorfer, PC7146-8, Reverchon, Van	3 [ ]
firm	Folfer, Kavics, Kordia, PA2UNIBO, Regina, Sumtare	4 [ ]
very firm	Balrine, Ferdiva	5 [ ]
<b>5.7 Time of beginning of flowering (48)</b>		
very early	Cristobalina, Royal Hazel	1 [ ]
very early to early	Christiana, Folfer, Müncheberger Frühernte, Panaro 1	2 [ ]
early	Marmotte, PA2UNIBO, Sumste, Sumtare	3 [ ]
early to medium	Burlat, Lapins	4 [ ]
medium	Merton Glory, Napoléon, Royal Helen, Sumele, Sunburst	5 [ ]
medium to late	Carmen, Karl, Kordia, Rubilam	6 [ ]
late	Germersdorfi 45, Habunt, Noire de Meched, Regina, Reverchon	7 [ ]
late to very late	Betti, Duroni 3	8 [ ]
very late	Hamid, Klara	9 [ ]
<b>5.8 Time of beginning of fruit ripening (49)</b>		
very early	Cristobalina, Ferprime, Hâtive de Bâle, Müncheberger Frühernte	1 [ ]
very early to early	Nimba, Rivedel	2 [ ]
early	Burlat, Early Rivers, Panaro 1, Valerij Cskalov	3 [ ]
early to medium	Bedel, Folfer	4 [ ]
medium	Fertille, Guillaume, Summit, Sunburst	5 [ ]
medium to late	Babelle, Duroni 3, Glenoia, PA5UNIBO	6 [ ]
late	Belge, Hedelfinger Riesenkirsche, Katalin, Klara, Kordia	7 [ ]
late to very late	Fertard, Regina, Sumtare	8 [ ]
very late	13S-2009	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>Leaf blade: length</i>	<i>medium</i>	<i>long</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		

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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<p>8. Authorization for release</p> <p>(a) Does the variety require prior authorization for release under legislation concerning the protection of the environment, human and animal health?</p> <p>Yes [ ] No [ ]</p> <p>(b) Has such authorization been obtained?</p> <p>Yes [ ] No [ ]</p> <p>If the answer to (b) is yes, please attach a copy of the authorization.</p>																		
<p>9. Information on plant material to be examined or submitted for examination</p> <p>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.</p> <p>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:</p> <table border="0"><tr><td>(a)</td><td>Microorganisms (e.g. virus, bacteria, phytoplasma)</td><td>Yes [ ]</td><td>No [ ]</td></tr><tr><td>(b)</td><td>Chemical treatment (e.g. growth retardant, pesticide)</td><td>Yes [ ]</td><td>No [ ]</td></tr><tr><td>(c)</td><td>Tissue culture</td><td>Yes [ ]</td><td>No [ ]</td></tr><tr><td>(d)</td><td>Other factors</td><td>Yes [ ]</td><td>No [ ]</td></tr></table> <p>Please provide details for where you have indicated "yes".</p> <p>.....</p>			(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 [ ]
(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 [ ]															
<p>10. I hereby declare that, to the best of my knowledge, the information provided in this form is correct:</p> <p>Applicant's name <input type="text"/></p> <p>Signature <input type="text"/> Date <input type="text"/></p>																		

[End of document]