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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 for adoption by correspondence*

*Disclaimer: this document does not represent UPOV policies or guidance*

Alternative names:*

| *Botanical name* | *English* | *French* | *German* | *Spanish* |
|---|---|---|---|---|
| *Prunus avium* (L.) L., *Cerasus avium* (L.) Moench | Sweet Cherry | Cerisier doux, Bigarreaux | 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 Prunus Rootstocks
TG/230 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), for the latest information.]

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## 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. 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 trees or one-year old grafts, on a rootstock specified by the competent authority, 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.

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 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 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 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<br>Exemples<br>Beispielssorten<br>Variedades ejemplo | Note/<br>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)-(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<br>Exemples<br>Beispielssorten<br>Variedades ejemplo | Note/<br>Nota |
|---|---|---|---|---|---|---|---|
| **1.** | | **QN VG** | **(+)** | **81** | | | |
| | | **Tree: vigor** | **Arbre : vigueur** | **Baum: Wuchsstärke** | **Árbol: vigor** | | |
| | | 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)** | **00** | | |
| | | **Tree: habit** | **Arbre : port** | **Baum: Wuchsform** | **Árbol: hábito** | | |
| | | 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 | retombant | überhängend | colgante | Annabella, Vanda | 4 |
| **3.** | **(*)** | **QN VG** | **(+)** | **(a)** | **00** | | |
| | | **Tree: density of branching** | **Arbre : densité de la ramification** | **Baum: Dichte der Verzweigung** | **Árbol: densidad de la ramificación** | | |
| | | very sparse | très lâche | sehr locker | muy escasa | Baïa | 1 |
| | | sparse | lâche | locker | escasa | 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)** | **00** | | |
| | | **One-year-old shoot: number of lenticels** | **Rameau d'un an : nombre de lenticelles** | **Einjähriger Trieb: Anzahl Lentizellen** | **Rama de un año: número de lenticelas** | | |
| | | very few | très petit | sehr gering | muy bajo | Ferdouce, 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 Königskirsche, Rosilam | 4 |
| | | very many | très élevé | sehr hoch | muy alto | Cambrina, Royal Bailey | 5 |

| | English | français | deutsch | español | Example Varieties<br>Exemples<br>Beispielssorten<br>Variedades ejemplo | Note/<br>Nota |
|---|---|---|---|---|---|---|
| **5.** | **QN VG** | **(+) (a)** | **00** | | | |
| | **One-year-old shoot: position of vegetative bud in relation to shoot** | **Rameau d'un an : position du bourgeon végétatif par rapport au rameau** | **Einjähriger Trieb: Position der vegetativen Knospe im Verhältnis zum Trieb** | **Rama de un año: posición de la yema vegetativa en relación con la rama** | | |
| | adpressed | apprimée | anliegend | adjunta | Duroni 3 | 1 |
| | erect | dressée | aufrecht | erecta | Rivedel | 2 |
| | semi-erect | demi-dressée | halbaufrecht | semierecta | Magar, Rita, Sunburst | 3 |
| **6.** | **QN VG** | | **33** | | | |
| | **Young shoot: anthocyanin coloration of apex** | **Jeune rameau : pigmentation anthocyanique de l'apex** | **Junger Trieb: Anthocyanfärbung des Apex** | **Rama joven: pigmentación antociánica del ápice** | | |
| | 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** | | **33** | | | |
| | **Young shoot: pubescence of apex** | **Jeune rameau : pilosité de l'apex** | **Junger Trieb: Behaarung des Apex** | **Rama joven: pubescencia del ápice** | | |
| | absent or very sparse | absente ou très lâche | fehlend oder sehr locker | ausente o muy laxa | PA2UNIBO | 1 |
| | sparse | lâche | locker | laxa | Habunt, Hedelfinger Riesenkirsche, Van | 2 |
| | medium | moyenne | mittel | media | Henriette, Kassins Frühe | 3 |
| | dense | dense | dicht | densa | Burlat, Early Rivers, Rocket | 4 |
| | very dense | très dense | sehr dicht | muy densa | Rosie, Swing | 5 |
| **8.** | **PQ VG** | **(+)** | **50** | | | |
| | **Fruiting spur: shape of apex** | **Rameau fructifère : forme de l'apex** | **Buketttrieb: Form des Apex** | **Espolón frutal: forma del ápice** | | |
| | acute | aigue | spitz | aguda | Bedel, Santina | 1 |
| | obtuse | obtuse | stumpf | obtusa | Magar, Rivedel | 2 |
| | rounded | arrondie | abgerundet | redondeada | Duroni 3, Van | 3 |

| | English | français | deutsch | español | Example Varieties<br>Exemples<br>Beispielssorten<br>Variedades ejemplo | Note/<br>Nota |
|---|---|---|---|---|---|---|
| **9.** | **QN MG/VG** | **(b)** | **39** | | | |
| | **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)** | **39** | | | |
| | **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, Poisdel, 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<br>Exemples<br>Beispielssorten<br>Variedades ejemplo | Note/<br>Nota |
|---|---|---|---|---|---|---|
| **11. (*)** | **QN MG/VG** | **(b)** | **39** | | | |
| | **Leaf blade: ratio length/width** | **Limbe : rapport longueur/largeur** | **Blattspreite: Verhältnis Länge/Breite** | **Limbo: relación longitud/anchura** | | |
| | 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, Poisdel, 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)** | **39** | | | |
| | **Leaf blade: intensity of green color of upper side** | **Limbe : intensité de la couleur verte de la face supérieure** | **Blattspreite: Intensität der Grünfärbung der Oberseite** | **Limbo: intensidad del color verde del haz** | | |
| | 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)** | **39** | | | |
| | **Leaf: length of petiole** | **Feuille : longueur du pétiole** | **Blatt: Länge des Blattstiels** | **Hoja: longitud del peciolo** | | |
| | 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<br>Exemples<br>Beispielssorten<br>Variedades ejemplo | Note/<br>Nota |
|---|---|---|---|---|---|---|
| **14. (*)** | **QN MG/VG** | **(b)** | **39** | | | |
| | **Leaf: ratio length of blade/length of petiole** | **Feuille : rapport longueur du limbe/longueur du pétiole** | **Blatt: Verhältnis Länge Blattspreite/Länge Blattstiel** | **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.** | **QL VG** | **(b)** | **39** | | | |
| | **Leaf: predominant number of nectaries** | **Feuille : nombre prédominant de nectaires** | **Blatt: überwiegende Anzahl 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)** | **39** | | | |
| | **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 | orangegelb | amarillo anaranjado | Hudson, Reverchon, Royal Hazel | 2 |
| | red | rouge | rot | rojo | Burlat, Early Rivers, Germersdorfi 45, Glenoia, Sylvia | 3 |
| | purple | pourpre | purpur | púrpura | Gege, Paulus, Rocket | 4 |
| **17.** | **QN MG/VG** | **(+) (c)** | **65** | | | |
| | **Flower: diameter** | **Fleur : diamètre** | **Blüte: Durchmesser** | **Flor: diámetro** | | |
| | 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 |

| | English | français | deutsch | español | Example Varieties<br>Exemples<br>Beispielssorten<br>Variedades ejemplo | Note/<br>Nota |
|---|---|---|---|---|---|---|
| **18.** | **PQ MG** | **(+) (c)** | **65** | | | |
| | **Flower: shape of petal** | **Fleur : forme du pétale** | **Blüte: Form des Blütenblattes** | **Flor: forma del pétalo** | | |
| | 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 |
| **19.** | **QN VG** | **(+) (c)** | **65** | | | |
| | **Flower: arrangement of petals** | **Fleur : disposition des pétales** | **Blüte: Anordnung der Blütenblätter** | **Flor: disposición de los pétalos** | | |
| | free | disjointe | freistehend | libre | Burlat, Royal Hazel, Sunburst | 1 |
| | intermediate | intermédiaire | mittel | intermedia | Germersdorfi 45, Nimba, Van | 2 |
| | overlapping | chevauchante | überlappend | solapada | Hudson, Royal Edie | 3 |
| **20.** | **QN VG** | **(+)** | **65** | | | |
| | **Anthers: position in relation to 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 |
| **21.** | **QN VG** | **(+)** | **65** | | | |
| | **Stigma: position in relation to anthers** | **Stigmate : position par rapport aux anthères** | **Narbe: Position im Verhältnis zu den Antheren** | **Estigma: posición en relación con las anteras** | | |
| | 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 |

| | English | français | deutsch | español | Example Varieties<br>Exemples<br>Beispielssorten<br>Variedades ejemplo | Note/<br>Nota |
|---|---|---|---|---|---|---|
| **22. (*)** | **QN MG/MS/VG** | **(+) (d)** | **87** | | | |
| | **Fruit: size** | **Fruit : taille** | **Frucht: Größe** | **Fruto: tamaño** | | |
| | very small | très petite | sehr klein | muy pequeño | Müncheberger Frühernte, Szomolyai fekete | 1 |
| | very small to small | très petite à petite | sehr klein bis klein | muy pequeño a pequeño | Cristobalina, Merton Crane | 2 |
| | small | petite | klein | pequeño | Ulster | 3 |
| | small to medium | petite à moyenne | klein bis mittel | pequeño a medio | Alex | 4 |
| | medium | moyenne | mittel | medio | Bing, Burlat, Rainier | 5 |
| | medium to large | moyenne à grande | mittel bis groß | medio a grande | Belge, Sunburst | 6 |
| | large | grande | groß | grande | Folfer, Rosie | 7 |
| | large to very large | grande à très grande | groß bis sehr groß | grande a muy grande | Baïa, Louis | 8 |
| | very large | très grande | sehr groß | muy grande | | 9 |
| **23.** | **QN MG/VG** | **(d), (e)** | **87** | | | |
| | **Fruit: height** | **Fruit : hauteur** | **Frucht: Höhe** | **Fruto: altura** | | |
| | 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)** | **87** | | | |
| | **Fruit: width** | **Fruit : largeur** | **Frucht: Breite** | **Fruto: anchura** | | |
| | 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 |
| **25.** | **QN MG/VG** | **(d), (e)** | **87** | | | |
| | **Fruit: ratio height/width** | **Fruit : rapport hauteur/largeur** | **Frucht: Verhältnis Höhe/Breite** | **Fruto: relación altura/anchura** | | |
| | 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 |

| | English | français | deutsch | español | Example Varieties<br>Exemples<br>Beispielssorten<br>Variedades ejemplo | Note/<br>Nota |
|---|---|---|---|---|---|---|
| **26. (*)** | **PQ VG** | **(+)** | **(d), (e)** | **87** | | |
| | **Fruit: shape in ventral view** | **Fruit : forme en vue ventrale** | **Frucht: Form in Bauchansicht** | **Fruto: forma en vista ventral** | | |
| | broad ovate | ovale large | breit eiförmig | oval ancha | Alex, Burlat, Glenoia | 1 |
| | reniform | réniforme | nierenförmig | reniforme | Big Star, Royal Edie, Van, Vera | 2 |
| | cordate | cordiforme | herzförmig | cordada | Louis, PA7UNIBO, Summit | 3 |
| | transverse elliptic | elliptique transverse | quer elliptisch | elíptica transversal | Ferdiva, Hedelfinger Riesenkirsche, Walter | 4 |
| | circular | circulaire | kreisförmig | circular | Reverchon | 5 |
| **27.** | **PQ VG** | **(+)** | **(d)** | **87** | | |
| | **Fruit: shape in cross section** | **Fruit : forme en section transversale** | **Frucht: Form im Querschnitt** | **Fruto: forma en sección transversal** | | |
| | 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), (e)** | **87** | | |
| | **Fruit: shape of base** | **Fruit : forme de la base** | **Frucht: Form der Basis** | **Fruto: forma de la base** | | |
| | truncate or weakly cordate | tronquée ou faiblement cordiforme | gerade oder leicht herzförmig | truncada o débilmente cordada | Duroni 3 | 1 |
| | medium cordate | moyennement cordiforme | mittel herzförmig | moderadamente cordada | Burlat, Van | 2 |
| | strongly cordate | fortement cordiforme | stark herzförmig | fuertemente cordada | PA7UNIBO, Summit | 3 |
| **29.** | **PQ VG** | **(+)** | **(d)** | **87** | | |
| | **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 | concave | konkav | cóncava | Fertille, Redlam | 1 |
| | flat | plate | flach | plana | Henriette, Van | 2 |
| | convex | convexe | konvex | convexa | PA6UNIBO, Sunburst | 3 |
| **30.** | **QN VG** | | **(d), (e)** | **87** | | |
| | **Fruit: suture** | **Fruit : suture** | **Frucht: Naht** | **Fruto: sutura** | | |
| | absent or slightly conspicuous | absente ou peu nette | fehlend oder schwach ausgeprägt | ausente o poco visible | Klara, Rosalolam | 1 |
| | moderately conspicuous | modérément nette | mäßig ausgeprägt | moderadamente visible | Cambrina, Rocket, Stella | 2 |
| | strongly conspicuous | très nette | stark ausgeprägt | fuertemente visible | Betti, Regina, SPC106 | 3 |

| | | English | français | deutsch | español | Example Varieties<br>Exemples<br>Beispielssorten<br>Variedades ejemplo | Note/<br>Nota |
|---|---|---|---|---|---|---|---|
| **31.** | **(*)** | **QN MG/VG** | **(d)** | **87** | | | |
| | | **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)** | **87** | | | |
| | | **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 |
| **33.** | | **QN VG** | **(d)** | **87** | | | |
| | | **Fruit: adherence to stalk** | **Fruit : adhérence au pédoncule** | **Frucht: Anhaften am Stiel** | **Fruto: adherencia al pedúnculo** | | |
| | | 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 |

| | English | français | deutsch | español | Example Varieties<br>Exemples<br>Beispielssorten<br>Variedades ejemplo | Note/<br>Nota |
|---|---|---|---|---|---|---|
| **34. (*)** | **PQ MG/VG** | **(d)** | **87** | | | |
| | **Fruit: ground color of skin** | **Fruit : couleur de fond de l'épiderme** | **Frucht: Grundfarbe der Haut** | **Fruto: color de fondo de la epidermis** | | |
| | yellow | jaune | gelb | amarillo | Bigarreau d'Or ,<br>Dönnissens Gelbe Knorpelkirsche | 1 |
| | orange red | rouge orangé | orangerot | rojo anaranjado | | 2 |
| | light red | rouge clair | hellrot | rojo claro | Krupnoplodnaya | 3 |
| | medium red | rouge moyen | mittelrot | rojo medio | Alex, Sunburst | 4 |
| | brown red | rouge-brun | braunrot | rojo parduzco | Burlat, Kordia, Lapins | 5 |
| | dark red | rouge foncé | dunkelrot | rojo oscuro | Hedelfinger Riesenkirsche, Stella | 6 |
| | blackish | noirâtre | schwärzlich | negruzco | Annabella,<br>Knauffs Schwarze,<br>Namosa | 7 |
| **35. (*)** | **QN VG** | **(d)** | **87** | | | |
| | **Fruit: relative area of over color** | **Fruit : surface relative de la couleur du lavis** | **Frucht: relative Fläche der Deckfarbe** | **Fruto: zona relativa del color de fondo** | | |
| | 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)** | **87** | | | |
| | **Fruit: size of lenticels on skin** | **Fruit : taille des lenticelles sur l'épiderme** | **Frucht: Größe der Lentizellen auf der Haut** | **Fruto: tamaño de las lenticelas en la epidermis** | | |
| | 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 |
| **37.** | **QN MG/VG** | **(d)** | **87** | | | |
| | **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 |

| | | English | français | deutsch | español | Example Varieties<br>Exemples<br>Beispielssorten<br>Variedades ejemplo | Note/<br>Nota |
|---|---|---|---|---|---|---|---|
| **38.** | | **QN VG** | **(+) (d)** | **87** | | | |
| | | **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 |
| | | medium | moyenne | mittel | medio | Big Star, Cambrina, Germersdorfi 45 | 2 |
| | | thick | épaisse | dick | grueso | Carmen, Walter | 3 |
| **39.** | **(*)** | **PQ VG** | **(+) (d)** | **87** | | | |
| | | **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)** | **87** | | | |
| | | **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 |
| **41.** | | **PQ VG** | **(d)** | **87** | | | |
| | | **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 |

| | English | français | deutsch | español | Example Varieties<br>Exemples<br>Beispielssorten<br>Variedades ejemplo | Note/<br>Nota |
|---|---|---|---|---|---|---|
| **42. (*) QN MG/MS/VG** | | **(d)** | **87** | | | |
| | **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)** | **87** | | | |
| | **Fruit: sweetness** | **Fruit : sucrosité** | **Frucht: Süße** | **Fruto: sabor dulce** | | |
| | low | faible | gering | bajo | Müncheberger Frühernte | 1 |
| | low to medium | faible à moyenne | gering bis mittel | bajo a medio | | 2 |
| | medium | moyenne | mittel | medio | Burlat, Sunburst | 3 |
| | medium to high | moyenne à élevée | mittel bis hoch | medio a alto | | 4 |
| | high | élevée | hoch | alto | Bigarreau d'Or, Kordia | 5 |
| **44. QN MG/VG** | | **(+) (d)** | **87** | | | |
| | **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 |
| **45. (*) QN MG/VG** | | **(+) (d)** | **87** | | | |
| | **Stone: size** | **Noyau : taille** | **Stein: Größe** | **Hueso: tamaño** | | |
| | 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 |

| | English | français | deutsch | español | Example Varieties<br>Exemples<br>Beispielssorten<br>Variedades ejemplo | Note/<br>Nota |
|---|---|---|---|---|---|---|
| **46.** | **QN MG/VG** | **(d)** | **87** | | | |
| | **Fruit: ratio size of fruit/size of stone** | **Fruit : rapport taille du fruit/taille du noyau** | **Frucht: Verhältnis Größe der Frucht/Größe des Steins** | **Fruto: relación tamaño del fruto/tamaño del hueso** | | |
| | 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)** | **87** | | | |
| | **Stone: shape in ventral view** | **Noyau : forme en vue ventrale** | **Stein: Form in Bauchansicht** | **Hueso: forma en vista ventral** | | |
| | medium elliptic | elliptique moyenne | mittel elliptisch | elíptica media | 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 |
| **48.** | **(*) QN MG/VG** | **(+)** | **61** | | | |
| | **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 |

| | English | français | deutsch | español | Example Varieties<br>Exemples<br>Beispielssorten<br>Variedades ejemplo | Note/<br>Nota |
|---|---|---|---|---|---|---|
| **49. (*) QN MG/VG** | | **(+)** | **87** | | | |
| | **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:

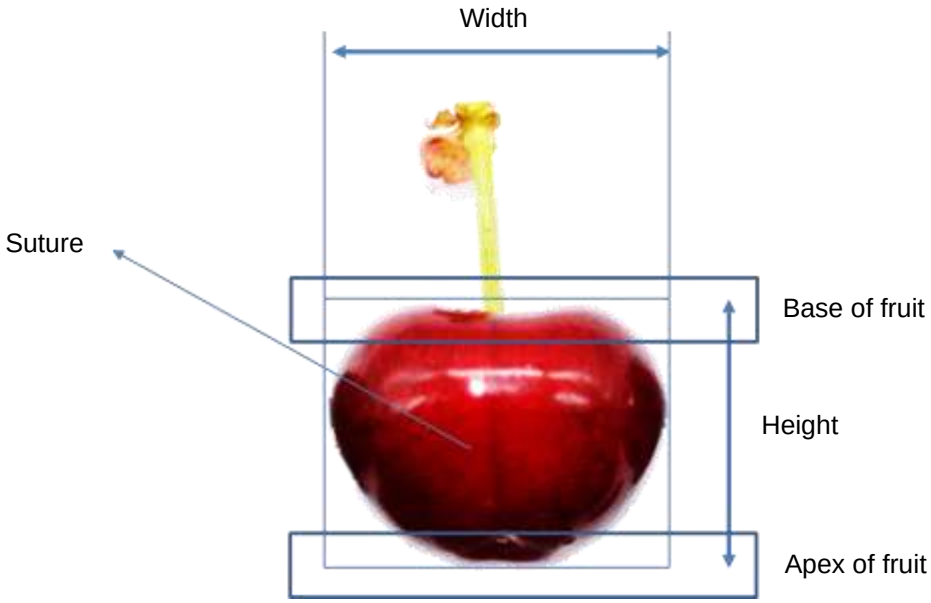
(a) Observations should be made during winter, on trees after at least one satisfactory crop of fruits.

(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) Observations should be made in ventral view.

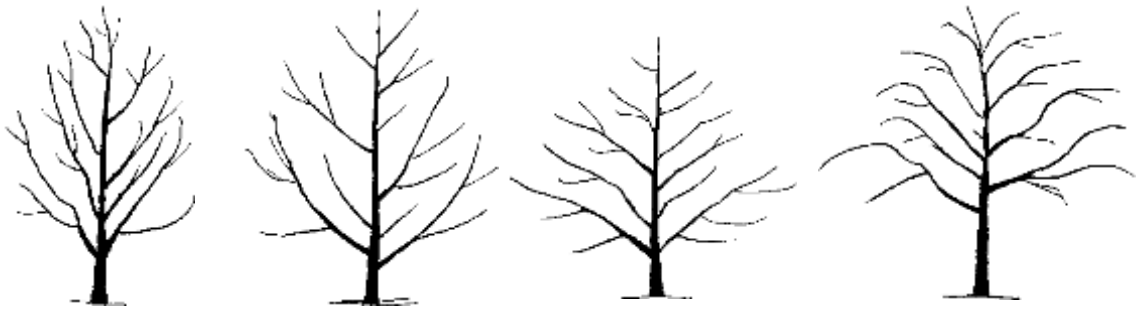



*8.2 Explanations for individual characteristics*

Ad. 1: Tree: vigor

Observations should be made on the overall abundance of vegetative growth, when the tree has reached the peak of vegetative growth.

Ad. 2: Tree: habit



1 upright | 2 semi-upright | 3 spreading | 4 drooping

Ad. 3: Tree: density of branching

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

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| very sparse | sparse | medium | dense | very dense |

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

| 1 | 2 | 3 |
|---|---|---|
| adpressed | erect | semi-erect |

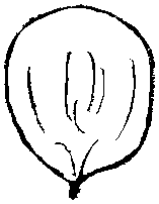
Ad. 8: Fruiting spur: shape of apex

| 1 | 2 | 3 |
|---|---|---|
| acute | obtuse | rounded |

Ad. 17: Flower: diameter

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

Ad. 18: Flower: shape of petal

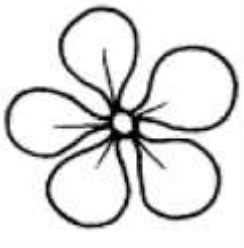


1
circular

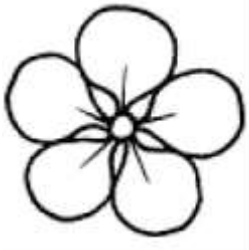
2
medium obovate

3
broad obovate

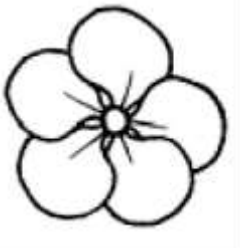
Ad. 19: Flower: arrangement of petals



1
free



2
intermediate



3
overlapping

Ad. 20: Anthers: position in relation to top of petals

1
below

2
same level

3
above

Ad. 21: Stigma: position in relation to anthers

1
below

2
same level

3
above

Ad. 22: Fruit: size

Observations should be made by weighing or by observing the length and width.

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 broad ovate |  4 transverse elliptic |

Ad. 27: Fruit: shape in cross section

1
circular

2
elliptic

3
angular

Ad. 28: Fruit: shape of base

1
truncate or weakly cordate

2
medium cordate

3
strongly cordate

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

1
concave

2
flat

3
convex

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 color with the largest surface area.

Ad. 43: Fruit: sweetness

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

Ad. 44: Fruit: acidity

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

Ad. 45: Stone: size

Observations should be made by weighing or by observing the length and width.

Ad. 48: Time of beginning of flowering

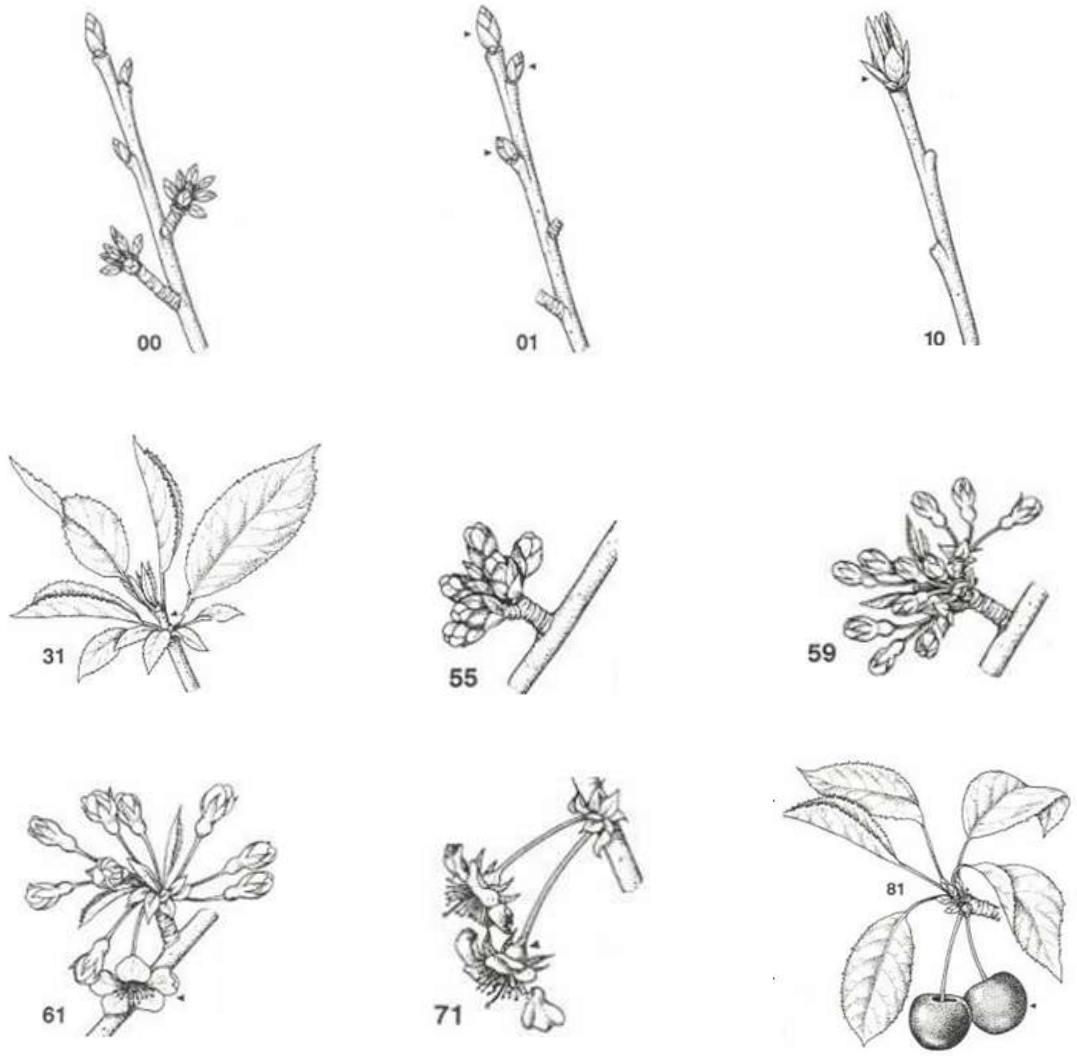
The time of beginning of flowering is reached when 10% of the flowers are fully open.

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 as the time when the fruit can be most easily removed from the stalk and are ready to be eaten.

*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 | Synonyms |
|---|---|
| Areko | Hamid |
| Early Rivers | Bigarreau précoce de Rivers, Guigne, Franse Vroege; Freinsheimer Schloßkirsche; Frühe Rivers; Heidelberger Schloßkirsche; Kastanka; Kastinky; Lindekers; 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: |
|---|---|---|

| | Application date:<br>(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 | *Prunus avium* (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: |
|---|---|---|

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

4.1 Breeding scheme

Variety resulting from:

4.1.1 Crossing

(a) controlled cross [ ]

(please state parent variety)

(……..……..…) x (……..……..…)

female parent male parent

(b) partially known cross [ ]

(please state known parent variety(ies))

(……..……..…) x (……..……..…)

female parent male parent

(c) unknown cross [ ]

4.1.2 Mutation [ ]
(please state parent variety)

| |
|---|
| |

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

| |
|---|
| |

4.1.4 Other [ ]
(Please provide details)

| |
|---|
| |

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

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

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: |
|---|---|---|

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

| | Characteristics | Example Varieties | Note |
|---|---|---|---|
| **5.1 (2)** | **Tree: habit** | | |
| | upright | Baïa, Lapins, Melitopol'skaya rannyaya | 1 [ ] |
| | semi-upright | Burlat, Napoléon | 2 [ ] |
| | spreading | Fertard, Sumtare, Vera | 3 [ ] |
| | drooping | Annabella, Vanda | 4 [ ] |
| **5.2 (22)** | **Fruit: size** | | |
| | very small | Müncheberger Frühernte, Szomolyai fekete | 1 [ ] |
| | very small to small | Cristobalina, Merton Crane | 2 [ ] |
| | small | Ulster | 3 [ ] |
| | small to medium | Alex | 4 [ ] |
| | medium | Bing, Burlat, Rainier | 5 [ ] |
| | medium to large | Belge, Sunburst | 6 [ ] |
| | large | Folfer, Rosie | 7 [ ] |
| | large to very large | Baïa, Louis | 8 [ ] |
| | very large | | 9 [ ] |
| **5.3 (26)** | **Fruit: shape in ventral view** | | |
| | broad ovate | Alex, Burlat, Glenoia | 1 [ ] |
| | reniform | Big Star, Royal Edie, Van, Vera | 2 [ ] |
| | cordate | Louis, PA7UNIBO, Summit | 3 [ ] |
| | transverse elliptic | Ferdiva, Hedelfinger Riesenkirsche, Walter | 4 [ ] |
| | circular | Reverchon | 5 [ ] |
| **5.4 (34)** | **Fruit: ground color of skin** | | |
| | yellow | Bigarreau d'Or, Dönnissens Gelbe Knorpelkirsche | 1 [ ] |
| | orange red | | 2 [ ] |
| | light red | Krupnoplodnaya | 3 [ ] |
| | medium 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: |
|---|---|---|

| | Characteristics | Example Varieties | Note |
|---|---|---|---|
| **5.5 (39)** | **Fruit: main color of flesh** | | |
| | 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 [ ] |
| **5.6 (42)** | **Fruit: firmness** | | |
| | 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 [ ] |
| **5.7 (48)** | **Time of beginning of flowering** | | |
| | 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 [ ] |
| **5.8 (49)** | **Time of beginning of fruit ripening** | | |
| | 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: |
|---|---|---|

6. Similar varieties and differences from these varieties

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

| Denomination(s) of variety(ies) similar to your candidate variety | Characteristic(s) in which your candidate variety differs from the similar variety(ies) | Describe the expression of the characteristic(s) for the **similar** variety(ies) | Describe the expression of the characteristic(s) for **your** candidate variety |
|---|---|---|---|
| *Example* | *Leaf blade: length* | *medium* | *long* |
| | | | |
| | | | |
| | | | |

Comments:

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

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

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

Yes [ ] No [ ]

(If yes, please provide details)

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

Yes [ ] No [ ]

(If yes, please provide details)

7.3 Other information

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

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

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]