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| |  |  |  | | --- | --- | --- | |  |  | **E** | |  |  |  | |  | wordml://75.png | |  | | --- | | **TG/22/11(proj.4)** | | **ORIGINAL:** English | | **DATE:** 2022-05-25 | | | **INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS** | | | |  | Geneva |  | |  | |  |  |  | | --- | --- | --- | |  |  |  | |  | DRAFT |  | |  |  |  | |  | |  |  |  | |  | |  | | --- | |  | | **STRAWBERRY** | |  | | |  | | --- | |  | | |  | | --- | | UPOV Code(s): FRAGA | | |  | | |  | | |  |  | | --- | --- | | |  | | --- | | *Fragaria* L. | | |  | | |  | | |  | | --- | | \* | | |  |  |  | | |  | | --- | | **GUIDELINES** | |  | | **FOR THE CONDUCT OF TESTS** | |  | | **FOR DISTINCTNESS, UNIFORMITY AND STABILITY** | | | | |  |  |  | | |  | | --- | | *prepared by experts from Germany* | | *to be considered by the* | | |  | | --- | | *Technical Working Party for Fruit Crops* | | | *at its fifty-third session, to be held virtually,* | | |  | | --- | | *from 2022-07-11 to 2022-07-15* | | | | | | *Disclaimer: this document does not represent UPOV policies or guidance* | | | | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  | | --- | | Alternative names:\* | | | | | | | |  | | --- | |  | | | | | | | *Botanical name* | *English* | *French* | *German* | *Spanish* | | |  | | --- | | *Fragaria* L. | | |  | | --- | | Strawberry | | |  | | --- | | Fraisier | | |  | | --- | | Erdbeere | | |  | | --- | | Fresa, Frutilla | | | | | |  |  |  | | The purpose of these guidelines (“Test Guidelines”) is to elaborate the principles contained in the General Introduction (document TG/1/3), and its associated TGP documents, into detailed practical guidance for the harmonized examination of distinctness, uniformity and stability (DUS) and, in particular, to identify appropriate characteristics for the examination of DUS and production of harmonized variety descriptions. | | | |  | | | | |  | | --- | | **ASSOCIATED DOCUMENTS** | | These Test Guidelines should be read in conjunction with the General Introduction and its associated TGP documents. | |  | | | | |

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| |  |  | | --- | --- | | TABLE OF CONTENTS | PAGE | |  |  | | |  |  |  | | --- | --- | --- | | 1. | SUBJECT OF THESE TEST GUIDELINES.......................................................................................................... | [3](#Section1) | |  |  |  | | 2. | MATERIAL REQUIRED..................................................................................................................... | [3](#Section2) | |  |  |  | | 3. | METHOD OF EXAMINATION............................................................................................................... | [3](#Section3) | |  |  |  | |  | |  |  |  | | --- | --- | --- | | 3.1 | Number of Growing Cycles................................................................................................................. | [3](#Section3-1) | | 3.2 | Testing Place................................................................................................................... | [3](#Section3-2) | | 3.3 | Conditions for Conducting the Examination............................................................................................... | [3](#Section3-3) | | 3.4 | Test Design................................................................................................................. | [5](#Section3-4) | | 3.5 | Additional Tests................................................................................................................... | [5](#Section3-5) | | | |  |  |  | | 4. | ASSESSMENT OF DISTINCTNESS, UNIFORMITY AND STABILITY................................................................. | [5](#Section4) | |  |  |  | |  | |  |  |  | | --- | --- | --- | | 4.1 | Distinctness.......................................................................................................... | [5](#Section4-1) | | 4.2 | Uniformity............................................................................................................ | [6](#Section4-2) | | 4.3 | Stability............................................................................................................... | [6](#Section4-3) | | | |  |  |  | | 5. | GROUPING OF VARIETIES AND ORGANIZATION OF THE GROWING TRIAL................................................ | [7](#Section5) | |  |  |  | | 6. | INTRODUCTION TO THE TABLE OF CHARACTERISTICS................................................................................ | [8](#Section6) | |  |  |  | |  | |  |  |  | | --- | --- | --- | | 6.1 | Categories of Characteristics...................................................................................................... | [8](#Section6-1) | | 6.2 | States of Expression and Corresponding Notes........................................................................................ | [8](#Section6-2) | | 6.3 | Types of Expression............................................................................................................ | [8](#Section6-3) | | 6.4 | Example Varieties.............................................................................................................. | [8](#Section6-4) | | 6.5 | Legend................................................................................................................. | [9](#Section6-5) | | | |  |  |  | | 7. | TABLE OF CHARACTERISTICS/TABLEAU DES CARACTÈRES/MERKMALSTABELLE/TABLA DE CARACTERES.................................................................................................................. | [10](#Section7) | |  |  |  | | 8. | EXPLANATIONS ON THE TABLE OF CHARACTERISTICS............................................................................... | [26](#Section8) | |  | |  |  |  | | --- | --- | --- | | 8.1 | Explanations covering several characteristics........................................................................................... | [26](#Section8-1) | | |  | | --- | | 8.2 | | Explanations for individual characteristics................................................................................................. | [27](#Section8-2) | | | |  |  |  | | 9. | LITERATURE................................................................................................................... | [37](#Section9) | |  |  |  | | 10 | TECHNICAL QUESTIONNAIRE............................................................................................................ | [38](#Section10) | |  |  |  | |  | |  | | --- | |  | |  | | | |

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| --- | --- |
| 1. | Subject of these Test Guidelines |
|  |  |
|  | |  | | --- | | These Test Guidelines apply to all varieties of *Fragaria* L. | |

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| 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 young plants or seed. | |
|  |  |
| 2.3 | |  | | --- | | The minimum quantity of plant material, to be supplied by the applicant, should be: | |
|  |  |
|  | |  | | --- | | Vegetatively propagated varieties:  20 young plants  Seed propagated varieties:  sufficient seed to produce 20 plants, or 20 young plants raised from seed. | |
|  |  |
|  | In the case of seed, the seed should meet the minimum requirements for germination, species and analytical purity, health and moisture content, 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. | |

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| 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 should be in the form of a single or two separate plantings. | |
|  |  |
| |  | | --- | | 3.1.3 | | |  | | --- | | In particular, it is essential that the plants produce a satisfactory crop of fruit in each of the two growing cycles. | |
|  |  |
| |  | | --- | | 3.1.4 | | The growing cycle is considered to be the period ranging from the beginning of active vegetative growth or flowering, continuing through active vegetative growth or flowering and fruit development and concluding with the harvesting of fruit. |
|  |  |
| |  | | --- | | 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* |
|  |  |
| |  | | --- | |  | | The tests should be carried out under conditions ensuring satisfactory growth for the expression of the relevant characteristics of the variety and for the conduct of the examination. |
|  |  |

|  |  |
| --- | --- |
| *3.4* | *Test Design* |
|  |  |
|  | |  | | --- | | Each test should be designed to result in a total of at least 20 plants. | |
|  |  |
| |  | | --- | |  |   *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 8 plants or parts of plants taken from each of 8 plants and any other observations made on all plants in the test, disregarding any off-type plants. | |
|  |  |
| 4.1.5 | Method of Observation |
|  |  |
|  | The recommended method of observing the characteristic for the purposes of distinctness is indicated by the following key in the 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 and seed‑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 cross-pollinated should be according to the recommendations for cross-pollinated varieties in the General Introduction. |
|  |  |
| 4.2.4 | The assessment of uniformity for hybrid varieties depends on the type of hybrid and should be according to the recommendations for hybrid varieties in the General Introduction. |
|  |  |
| 4.2.5 | |  | | --- | | 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 20 plants, 1 off-type is allowed. | |
|  |  |
| *4.3* | *Stability* |
|  |  |
| 4.3.1 | In practice, it is not usual to perform tests of stability that produce results as certain as those of the testing of distinctness and uniformity. However, experience has demonstrated that, for many types of variety, when a variety has been shown to be uniform, it can also be considered to be stable. |
|  |  |
| 4.3.2 | Where appropriate, or in cases of doubt, stability may be further examined by testing a new seed or plant stock to ensure that it exhibits the same characteristics as those shown by the initial material supplied. |

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| 5. | Grouping of Varieties and Organization of the Growing Trial |
|  |  |
| 5.1 | The selection of varieties of common knowledge to be grown in the trial with the candidate varieties and the way in which these varieties are divided into groups to facilitate the assessment of distinctness are aided by the use of grouping characteristics. |
|  |  |
| 5.2 | Grouping characteristics are those in which the documented states of expression, even where produced at different locations, can be used, either individually or in combination with other such characteristics: (a) to select varieties of common knowledge that can be excluded from the growing trial used for examination of distinctness; and (b) to organize the growing trial so that similar varieties are grouped together. |
|  |  |
| 5.3 | The following have been agreed as useful grouping characteristics: |
|  | |  |  |  | | --- | --- | --- | |  |  |  | | |  | | --- | | (a) | |  | |  | | --- | | Plant : growth habit (characteristic 1) | | | |  | | --- | | (b) | |  | |  | | --- | | Leaf: size (characteristic 7) | | | |  | | --- | | (c) | |  | |  | | --- | | Petiole: attitude of hairs (characteristic 17) | | | |  | | --- | | (d) | |  | |  | | --- | | Flower: diameter (characteristic 19) | | | |  | | --- | | (e) | |  | |  | | --- | | Flower: size of calyx in relation to corolla (characteristic 21) | | | |  | | --- | | (f) | |  | |  | | --- | | Petal: color of upper side (characteristic 25) | | | |  | | --- | | (g) | |  | |  | | --- | | Fruit: length in relation to diameter (characteristic 26) | | | |  | | --- | | (h) | |  | |  | | --- | | Fruit: size (characteristic 27) | | | |  | | --- | | (i) | |  | |  | | --- | | Fruit: shape (characteristic 28) | | | |  | | --- | | (j) | |  | |  | | --- | | Fruit: color (characteristic 32) | | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | |  |  |  |  |  | | --- | --- | --- | --- | --- | | |  | | --- | | (k) | |  | |  | | --- | | Fruit: position of achenes (characteristic 34) | | | |  | | --- | | (l) | |  | |  | | --- | | Fruit: position of calyx attachment (characteristic 37) | | | |  | | --- | | (m) | |  | |  | | --- | | Fruit: attitude of sepals (characteristic 38) | | | |  | | --- | | (n) | |  | |  | | --- | | Fruit: diameter of calyx in relation to diameter of fruit (characteristic 39) | | | |  | | --- | | (o) | |  | |  | | --- | | Time of beginning of flowering (characteristic 42) | | | |  | | --- | | (p) | |  | |  | | --- | | Time of beginning of fruit ripening (characteristic 43) | | | |  | | --- | | (q) | |  | |  | | --- | | Flowering runners (characteristic 44) | | | |  |  | | --- | --- | | |  | | --- | |  | | | | | |
| 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”. |

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|  |  |
| 6. | Introduction to the Table of Characteristics |
|  |  |
| *6.1* | *Categories of Characteristics* |
| 6.1.1 | Standard Test Guidelines Characteristics |
|  | Standard Test Guidelines characteristics are those which are approved by UPOV for examination of DUS and from which members of the Union can select those suitable for their particular circumstances. |
| 6.1.2 | Asterisked Characteristics |
|  | Asterisked characteristics (denoted by \*) are those included in the Test Guidelines which are important for the international harmonization of variety descriptions and should always be examined for DUS and included in the variety description by all members of the Union, except when the state of expression of a preceding characteristic or regional environmental conditions render this inappropriate. |
| *6.2* | *States of Expression and Corresponding Notes* |
| 6.2.1 | States of expression are given for each characteristic to define the characteristic and to harmonize descriptions. Each state of expression is allocated a corresponding numerical note for ease of recording of data and for the production and exchange of the description. |
| 6.2.2 | All relevant states of expression are presented in the characteristic. |
|  |  |
| 6.2.3 | Further explanation of the presentation of states of expression and notes is provided in document TGP/7 “Development of Test Guidelines”. |
| *6.3* | *Types of Expression* |
|  | An explanation of the types of expression of characteristics (qualitative, quantitative and pseudo-qualitative) is provided in the General Introduction. |
| *6.4* | *Example Varieties* |
|  | Where appropriate, example varieties are provided to clarify the states of expression of each characteristic. |

|  |  |
| --- | --- |
| *6.5* | *Legend* |
|  |  |
| |  |  | English | | français | | deutsch | español | Example Varieties Exemples Beispielssorten Variedades ejemplo | Note/ Nota | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | | **1** | | |  | | --- | | **2** | | |  | | --- | | **3** | | |  | | --- | | **4** | | |  | | --- | | **5** | | |  | | --- | | **6** | | |  | | --- | | **7** | | | | | |  |  | |  | | --- | | **Name of characteristics in English** | | | |  | | --- | | **Nom du caractère en français** | | | |  | | --- | | **Name des Merkmals auf Deutsch** | | |  | | --- | | **Nombre del carácter en español** | |  |  | |  |  | |  | | --- | | states of expression | | | |  | | --- | | types d’expression | | | |  | | --- | | Ausprägungsstufen | | |  | | --- | | tipos de expresión | | |  | | --- | |  | |  | |  |  |  |  |  |  |  |  |  |  | | |
| |  |  |  |  | | --- | --- | --- | --- | | 1 | Characteristic number | | | |  |  |  |  | | 2 | (\*) | Asterisked characteristic | – see Chapter 6.1.2 | |  |  |  |  | | 3 | Type of expression | | | |  | QL | Qualitative characteristic | – see Chapter 6.3 | |  | QN | Quantitative characteristic | – see Chapter 6.3 | |  | PQ | Pseudo-qualitative characteristic | – see Chapter 6.3 | |  |  |  |  | | 4 | Method of observation (and type of plot, if applicable) | | | |  | MG, MS, VG, VS | | – see Chapter 4.1.5 | |  |  |  |  | | 5 | |  | | --- | | (+) | | |  |  | | --- | --- | | |  | | --- | | See Explanations on the Table of Characteristics in Chapter 8.2 | | | | |  |  |  |  | | 6 | |  | | --- | | (a)-(d) | | |  |  | | --- | --- | | |  | | --- | | See Explanations on the Table of Characteristics in Chapter 8.1 | | | | |  |  |  |  | | 7 | |  | | --- | | Not applicable | | | | | |

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

|  |  | English | | français | | deutsch | español | Example Varieties Exemples Beispielssorten Variedades ejemplo | Note/ Nota |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **1.** | **(\*)** | **QN** | **VG** | **(+)** | **(a)** |  | | | |
|  |  | |  | | --- | | **Plant : growth habit** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | upright | |  | |  |  | Vibrant | 1 |
|  |  | upright to semi-upright | |  | |  |  | Korona | 2 |
|  |  | semi-upright | |  | |  |  | Senga Sengana | 3 |
|  |  | semi-upright to spreading | |  | |  |  | Weiße Ananas | 4 |
|  |  | spreading | |  | |  |  | Lucida Perfecta | 5 |
| **2.** |  | **QN** | **VG** | **(+)** | **(a)** |  | | | |
|  |  | |  | | --- | | **Plant: density of foliage** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | very sparse | |  | |  |  |  | 1 |
|  |  | very sparse to sparse | |  | |  |  |  | 2 |
|  |  | sparse | |  | |  |  | Elista, Pantagruella | 3 |
|  |  | sparse to medium | |  | |  |  | Cirafine, Elvira, Seascape, Sweet Eve | 4 |
|  |  | medium | |  | |  |  | Everest, Florin, Gorella | 5 |
|  |  | medium to dense | |  | |  |  | Darselect, Dream, Florence, MA 65 | 6 |
|  |  | dense | |  | |  |  | Sans Rivale, Yamaska | 7 |
|  |  | dense to very dense | |  | |  |  | Fontaine, Pink Extara | 8 |
|  |  | very dense | |  | |  |  | Alexandria | 9 |
| **3.** |  | **QN** | **VG** | **(+)** | **(a)** |  | | | |
|  |  | |  | | --- | | **Plant: vigor** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | very weak | |  | |  |  |  | 1 |
|  |  | very weak to weak | |  | |  |  | Yael | 2 |
|  |  | weak | |  | |  |  | Serenata, Temptation | 3 |
|  |  | weak to medium | |  | |  |  | CIVRI 30, Drisstrawfive | 4 |
|  |  | medium | |  | |  |  | Clery, Everest, Pandora | 5 |
|  |  | medium to strong | |  | |  |  | Korona, Salsa | 6 |
|  |  | strong | |  | |  |  | Florence, Yamaska | 7 |
|  |  | strong to very strong | |  | |  |  | BBB PO 01, Pink Extara | 8 |
|  |  | very strong | |  | |  |  | Schwarze Hubertus | 9 |

|  |  | English | | français | | deutsch | español | Example Varieties Exemples Beispielssorten Variedades ejemplo | Note/ Nota |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **4.** | **(\*)** | **QN** | **VG** |  | **(b)** |  | | | |
|  |  | |  | | --- | | **Plant: position of inflorescence in relation to foliage** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | strongly beneath | |  | |  |  | Lucia | 1 |
|  |  | slightly beneath | |  | |  |  | Senga Sengana | 2 |
|  |  | same level | |  | |  |  | Korona | 3 |
|  |  | slightly above | |  | |  |  | Daroyal | 4 |
|  |  | strongly above | |  | |  |  | Vibrant | 5 |
| **5.** |  | **QN** | **VG** |  | **(c)** |  | | | |
|  |  | |  | | --- | | **Plant: number of stolons** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | absent or very few | |  | |  |  | Durban, Leo Alba, Rügen | 1 |
|  |  | very few | |  | |  |  | Everest, Loran | 2 |
|  |  | few | |  | |  |  | Bolero, Sonata | 3 |
|  |  | few to medium | |  | |  |  | Malling Sunrise, Marionnet 97 | 4 |
|  |  | medium | |  | |  |  | Altess, Amandine,  NF 633, Vivaldi | 5 |
|  |  | medium to many | |  | |  |  | Ranaissance, Starlette | 6 |
|  |  | many | |  | |  |  | Roseta | 7 |
|  |  | many to very many | |  | |  |  | Mieze Nova | 8 |
|  |  | very many | |  | |  |  | BBB PO 01 | 9 |
| **6.** |  | **QN** | **VG** | **(+)** | **(c)** |  | | | |
|  |  | |  | | --- | | **Stolon: intensity of anthocyanin coloration** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | absent or very weak | |  | |  |  | Leo Alba | 1 |
|  |  | weak | |  | |  |  | Alice, BBB PO 01, Florence, Salsa | 2 |
|  |  | medium | |  | |  |  | Albion, Charlotte, Darselect | 3 |
|  |  | strong | |  | |  |  | Candiss, Wendy | 4 |
|  |  | very strong | |  | |  |  |  | 5 |

|  |  | English | | français | | deutsch | español | Example Varieties Exemples Beispielssorten Variedades ejemplo | Note/ Nota |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **7.** | **(\*)** | **QN** | **MG/VG** | **(+)** | **(a)** |  | | | |
|  |  | |  | | --- | | **Leaf: size** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | very small | |  | |  |  |  | 1 |
|  |  | very small to small | |  | |  |  |  | 2 |
|  |  | small | |  | |  |  | Fontaine | 3 |
|  |  | small to medium | |  | |  |  | Sans Rivale, Toscana | 4 |
|  |  | medium | |  | |  |  | Gorella, Korona,  Senga Sengana | 5 |
|  |  | medium to large | |  | |  |  | Elsanta, Honeoye, Salsa | 6 |
|  |  | large | |  | |  |  | Aprica, Darselect | 7 |
|  |  | large to very large | |  | |  |  | Merkur, Ramir | 8 |
|  |  | very large | |  | |  |  |  | 9 |
| **8.** |  | **PQ** | **VG** |  | **(a)** |  | | | |
|  |  | |  | | --- | | **Leaf: color of upper side** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | yellow green | |  | |  |  |  | 1 |
|  |  | light green | |  | |  |  | Junita | 2 |
|  |  | medium green | |  | |  |  | Dream, Malling Centenary | 3 |
|  |  | dark green | |  | |  |  | Marionnet 99,  Mieze Schindler | 4 |
|  |  | blue green | |  | |  |  | Mount Everest | 5 |
| **9.** | **(\*)** | **QN** | **VG** | **(+)** | **(a)** |  | | | |
|  |  | |  | | --- | | **Leaf: rugosity** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | absent or very weak | |  | |  |  | Anablanca, Florence, Yamaska | 1 |
|  |  | weak | |  | |  |  | Clery | 2 |
|  |  | medium | |  | |  |  | Cigaline, Everest | 3 |
|  |  | strong | |  | |  |  | Cijosée | 4 |
|  |  | very strong | |  | |  |  | Bogota, Romina, Symphony | 5 |
| **10** | **(\*)** | **QN** | **VG** | **(+)** | **(a)** |  | | | |
|  |  | |  | | --- | | **Leaf: glossiness** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | absent or weak | |  | |  |  | Bogota, White Dream | 1 |
|  |  | medium | |  | |  |  | Irvine, Kamila,  Marionnet 86 | 2 |
|  |  | strong | |  | |  |  | Aramella, Florence, Sweet Delight, Verity, Vivara | 3 |

|  |  | English | | français | | deutsch | español | Example Varieties Exemples Beispielssorten Variedades ejemplo | Note/ Nota |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **11** | **(\*)** | **QN** | **MG/VG** |  | **(a)** |  | | | |
|  |  | |  | | --- | | **Terminal leaflet: length in relation to width** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | shorter than broad | |  | |  |  |  | 1 |
|  |  | as short as broad | |  | |  |  | Cirano, Everest, Salsa | 2 |
|  |  | longer than broad | |  | |  |  | Elsanta, Korona, Symphony | 3 |
|  |  | much longer than broad | |  | |  |  | Anablanca, Cigaline | 4 |
| **12** |  | **PQ** | **VG** | **(+)** | **(a)** |  | | | |
|  |  | |  | | --- | | **Terminal leaflet: shape of base** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | acute | |  | |  |  | Aramella | 1 |
|  |  | obtuse | |  | |  |  | Cirano, Verity | 2 |
|  |  | rounded | |  | |  |  | NF 421 | 3 |
| **13** |  | **PQ** | **VG** | **(+)** | **(a)** |  | | | |
|  |  | |  | | --- | | **Terminal leaflet: margin** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | serrate | |  | |  |  | Chandler, Elsanta, Gariguette, Yamaska | 1 |
|  |  | serrate to crenate | |  | |  |  | Altess, Amandine, Pandora | 2 |
|  |  | crenate | |  | |  |  | Cambridge Favourite, Everest | 3 |
| **14** |  | **QN** | **VG** | **(+)** | **(a)** |  | | | |
|  |  | |  | | --- | | **Terminal leaflet: depth of incision of margin** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | very shallow | |  | |  |  | Weiße Ananas | 1 |
|  |  | shallow | |  | |  |  | Senga Sengana | 2 |
|  |  | medium | |  | |  |  | Symphony | 3 |
|  |  | deep | |  | |  |  | Polka | 4 |
|  |  | very deep | |  | |  |  | Cigaline | 5 |
| **15** |  | **QN** | **VG** | **(+)** | **(a)** |  | | | |
|  |  | |  | | --- | | **Terminal leaflet: shape in cross section** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | concave | |  | |  |  | MA 65, Malwina, Verity | 1 |
|  |  | straight | |  | |  |  | Aramella, Cigaline | 2 |
|  |  | convex | |  | |  |  | Cirano | 3 |

|  |  | English | | français | | deutsch | español | Example Varieties Exemples Beispielssorten Variedades ejemplo | Note/ Nota |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **16** |  | **QN** | **MG/VG** | **(+)** | **(a)** |  | | | |
|  |  | |  | | --- | | **Petiole: length** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | very short | |  | |  |  |  | 1 |
|  |  | very short to short | |  | |  |  | Fontaine | 2 |
|  |  | short | |  | |  |  | Rosa Perle, Tristan | 3 |
|  |  | short to medium | |  | |  |  | Floriante | 4 |
|  |  | medium | |  | |  |  | Everest, Favori | 5 |
|  |  | medium to long | |  | |  |  | GH 75 | 6 |
|  |  | long | |  | |  |  | Malwina | 7 |
|  |  | long to very long | |  | |  |  | Faith | 8 |
|  |  | very long | |  | |  |  |  | 9 |
| **17** | **(\*)** | **QN** | **VG** | **(+)** | **(a)** |  | | | |
|  |  | |  | | --- | | **Petiole: attitude of hairs** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | adpressed | |  | |  |  | Elianny, Vivara | 1 |
|  |  | upwards | |  | |  |  | Darselect, Elsanta | 2 |
|  |  | outwards | |  | |  |  | Albion, Filicia, Malwina | 3 |
|  |  | downwards | |  | |  |  | to be provided | 4 |
| **18** |  | **QN** | **VG** |  | **(b)** |  | | | |
|  |  | |  | | --- | | **Stipule: intensity of anthocyanin coloration** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | absent or very weak | |  | |  |  | Clery, Hansawhit,  Lucida Perfecta,  Senga Sengana | 1 |
|  |  | weak | |  | |  |  | Camarosa, Darlisette, Korona, Lambada | 2 |
|  |  | medium | |  | |  |  | Anablanca,  Cambridge Favourite, Elsanta, Musica | 3 |
|  |  | strong | |  | |  |  | Darselect, Sonata | 4 |
|  |  | very strong | |  | |  |  | Frugodi | 5 |

|  |  | English | | français | | deutsch | español | Example Varieties Exemples Beispielssorten Variedades ejemplo | Note/ Nota |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **19** | **(\*)** | **QN** | **MG/VG** |  | **(c)** |  | | | |
|  |  | |  | | --- | | **Flower: diameter** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | very small | |  | |  |  |  | 1 |
|  |  | very small to small | |  | |  |  | Fontaine | 2 |
|  |  | small | |  | |  |  | Darestivale, Sans Rivale | 3 |
|  |  | small to medium | |  | |  |  | Majestic, Mara des Bois, Senga Sengana, Yamaska | 4 |
|  |  | medium | |  | |  |  | Bogota, Elsanta, Everest, Korona | 5 |
|  |  | medium to large | |  | |  |  | Camarosa, Chandler, Darselect | 6 |
|  |  | large | |  | |  |  | Cambridge Favourite, Ines | 7 |
|  |  | large to very large | |  | |  |  |  | 8 |
|  |  | very large | |  | |  |  | SG 0203 | 9 |
| **20** | **(\*)** | **QN** | **VG** | **(+)** | **(c)** |  | | | |
|  |  | |  | | --- | | **Flower: arrangement of petals** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | free | |  | |  |  | Gariguette, Lia | 1 |
|  |  | touching | |  | |  |  | Cijosée, Wendy | 2 |
|  |  | overlapping | |  | |  |  | Gladis,  Malling Centenary, Marionnet 86 | 3 |
| **21** | **(\*)** | **QN** | **VG** | **(+)** | **(c)** |  | | | |
|  |  | |  | | --- | | **Flower: size of calyx in relation to corolla** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | smaller | |  | |  |  | Jussara, Toscana | 1 |
|  |  | same size | |  | |  |  | Filicia, Gladis | 2 |
|  |  | larger | |  | |  |  | Camarosa, Candiss, Everest | 3 |
| **22** | **(\*)** | **QL** | **VG** |  | **(c)** |  | | | |
|  |  | |  | | --- | | **Flower: stamen** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | absent | |  | |  |  | Pandora, Yamaska | 1 |
|  |  | present | |  | |  |  | Gariguette | 9 |

|  |  | English | | français | | deutsch | español | Example Varieties Exemples Beispielssorten Variedades ejemplo | Note/ Nota |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **23** |  | **PQ** | **VG** | **(+)** | **(c)** |  | | | |
|  |  | |  | | --- | | **Petal: shape** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | elliptic | |  | |  |  | Gariguette | 1 |
|  |  | circular | |  | |  |  | Daroyal, Darselect, Weiße Ananas | 2 |
|  |  | transverse elliptic | |  | |  |  | Ines, Portola | 3 |
|  |  | ovate | |  | |  |  | BBB PO 01, Elsanta | 4 |
| **24** |  | **QN** | **MG/VG** |  | **(c)** |  | | | |
|  |  | |  | | --- | | **Petal: ratio length / width** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | low (or: shorter than wide) | |  | |  |  | Ines, Verity | 1 |
|  |  | medium (or: as long as wide) | |  | |  |  | CIR 104, Darselect, Honeoye, Majestic, Osiris | 2 |
|  |  | high (or: longer than wide) | |  | |  |  | Anablanca, BBB PO 01, Ciflorette, Gariguette, Gustine | 3 |
| **25** | **(\*)** | **PQ** | **VG** |  | **(c)** |  | | | |
|  |  | |  | | --- | | **Petal: color of upper side** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | greenish white | |  | |  |  |  | 1 |
|  |  | white | |  | |  |  | Gariguette | 2 |
|  |  | light pink | |  | |  |  | Marajox, Pikan | 3 |
|  |  | medium pink | |  | |  |  | Frel | 4 |
|  |  | dark pink | |  | |  |  | Tarpan | 5 |
|  |  | red | |  | |  |  |  | 6 |
| **26** | **(\*)** | **QN** | **MG/VG** |  | **(d)** |  | | | |
|  |  | |  | | --- | | **Fruit: length in relation to diameter** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | very low | |  | |  |  | Mieze Schindler | 1 |
|  |  | low | |  | |  |  | Lia, Sussette | 2 |
|  |  | medium | |  | |  |  | Gorella, Honeoye | 3 |
|  |  | high | |  | |  |  | Malling Centenary, Osiris | 4 |
|  |  | very high | |  | |  |  | Pantagruella | 5 |

|  |  | English | | français | | deutsch | español | Example Varieties Exemples Beispielssorten Variedades ejemplo | Note/ Nota |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **27** | **(\*)** | **QN** | **MG/VG** | **(+)** | **(d)** |  | | | |
|  |  | |  | | --- | | **Fruit: size** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | very small | |  | |  |  | Rosa Perle, Ulrichsburg | 1 |
|  |  | very small to small | |  | |  |  | Fontaine | 2 |
|  |  | small | |  | |  |  | abz v 32, Linne | 3 |
|  |  | small to medium | |  | |  |  | Toscana, Weiße Ananas | 4 |
|  |  | medium | |  | |  |  | BBB PO 01, Sans Rivale | 5 |
|  |  | medium to large | |  | |  |  | Finesse, MA 65 | 6 |
|  |  | large | |  | |  |  | Altess, Lia | 7 |
|  |  | large to very large | |  | |  |  | Albion, Verity | 8 |
|  |  | very large | |  | |  |  |  | 9 |
| **28** | **(\*)** | **PQ** | **VG** | **(+)** | **(d)** |  | | | |
|  |  | |  | | --- | | **Fruit: shape** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | reniform | |  | |  |  | Jumbo | 1 |
|  |  | conical | |  | |  |  | Albion, Clery, Everest, Matis, Murano,  Sweet Charlie | 2 |
|  |  | cordate | |  | |  |  | Malling Champion | 3 |
|  |  | ovate | |  | |  |  | Quarantaine de Prin | 4 |
|  |  | oblong | |  | |  |  |  | 5 |
|  |  | rhombic | |  | |  |  | Lumotar | 6 |
|  |  | oblate | |  | |  |  | BBB PO 01 | 7 |
|  |  | circular | |  | |  |  | Florika | 8 |
|  |  | wedged | |  | |  |  | Konia | 9 |
| **29** |  | **QN** | **VG** | **(+)** |  |  | | | |
|  |  | |  | | --- | | **Fruit: position of maximum diameter** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | strongly towards the calyx | |  | |  |  | Symphony | 1 |
|  |  | moderately towards the calyx | |  | |  |  | Senga Sengana | 2 |
|  |  | at middle | |  | |  |  | Florika, Weiße Ananas | 3 |

|  |  | English | | français | | deutsch | español | Example Varieties Exemples Beispielssorten Variedades ejemplo | Note/ Nota |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **30** |  | **PQ** | **VG** | **(+)** | **(d)** |  | | | |
|  |  | |  | | --- | | **Fruit: shape of apex** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | truncate | |  | |  |  |  | 1 |
|  |  | truncate with groove | |  | |  |  | Camarosa | 2 |
|  |  | retuse | |  | |  |  | Zanta | 3 |
|  |  | rounded | |  | |  |  | Korona, Weiße Ananas | 4 |
|  |  | acute | |  | |  |  |  | 5 |
| **31** |  | **PQ** | **VG** | **(+)** | **(d)** |  | | | |
|  |  | |  | | --- | | **Fruit: shape at calyx end** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | obtuse | |  | |  |  | NF 421 | 1 |
|  |  | rounded | |  | |  |  | Florence | 2 |
|  |  | flattened | |  | |  |  | Malwina, Symphony | 3 |
|  |  | retuse | |  | |  |  | Elegance | 4 |
| **32** | **(\*)** | **PQ** | **VG** | **(+)** | **(d)** |  | | | |
|  |  | |  | | --- | | **Fruit: color** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | pinkish white | |  | |  |  | Weiße Ananas | 1 |
|  |  | yellowish white | |  | |  |  | Lucida Perfecta | 2 |
|  |  | light orange | |  | |  |  | Merton Dawn | 3 |
|  |  | medium orange | |  | |  |  | Cambridge Favourite | 4 |
|  |  | orange red | |  | |  |  | Gorella | 5 |
|  |  | pink | |  | |  |  |  | 6 |
|  |  | light red | |  | |  |  |  | 7 |
|  |  | medium red | |  | |  |  | Elsanta, Royal Sovereign, Sweet Charlie | 8 |
|  |  | dark red | |  | |  |  | Honeoye, Seascape, Senga Sengana | 9 |
|  |  | blackish red | |  | |  |  | Arista | 10 |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **33** |  | **QN** | **VG** | **(+)** | **(d)** |  | | | |
|  |  | |  | | --- | | **Fruit: width of band without achenes** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | absent or very narrow | |  | |  |  | Drisstrawfive, Fontaine | 1 |
|  |  | very narrow to narrow | |  | |  |  | Altess, Amandine, Verity | 2 |
|  |  | narrow | |  | |  |  | Elsanta, Everest, Murano, Pandora | 3 |
|  |  | narrow to medium | |  | |  |  | CIR 107, Honeoye, Ines | 4 |
|  |  | medium | |  | |  |  | Dream, Lorette, Salsa | 5 |
|  |  | medium to broad | |  | |  |  | Romina, Yamaska | 6 |
|  |  | broad | |  | |  |  | Frugodi, Valotar | 7 |
|  |  | broad to very broad | |  | |  |  |  | 8 |
|  |  | very broad | |  | |  |  |  | 9 |
| **34** | **(\*)** | **QN** | **VG** | **(+)** | **(d)** |  | | | |
|  |  | |  | | --- | | **Fruit: position of achenes** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | strongly below surface | |  | |  |  | Mieze Schindler | 1 |
|  |  | slightly below surface | |  | |  |  | Albion, Kimberley | 2 |
|  |  | level with surface | |  | |  |  | Malling Centenary, Osiris | 3 |
|  |  | above surface | |  | |  |  | Alice, Frugodi, Toscana | 4 |
| **35** |  | **PQ** | **VG** | **(+)** |  |  | | | |
|  |  | |  | | --- | | **Fruit: color of achenes** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | greenish | |  | |  |  | Lucy | 1 |
|  |  | yellow | |  | |  |  | Candiss | 2 |
|  |  | red | |  | |  |  | Weiße Ananas | 3 |
| **36** |  | **QN** | **MG/VG** | **(+)** | **(d)** |  | | | |
|  |  | |  | | --- | | **Fruit: density of achenes** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | sparse | |  | |  |  |  | 1 |
|  |  | medium | |  | |  |  | Elegance, Evita, Red Glory | 2 |
|  |  | dense | |  | |  |  | Lucy, NF 205 | 3 |

|  |  | English | | français | | deutsch | español | Example Varieties Exemples Beispielssorten Variedades ejemplo | Note/ Nota |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **37** | **(\*)** | **QN** | **VG** | **(+)** | **(d)** |  | | | |
|  |  | |  | | --- | | **Fruit: position of calyx attachment** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | inserted | |  | |  |  | Finesse | 1 |
|  |  | level with fruit | |  | |  |  | Lia, Murano,  Senga Sengana,  Sweet Charlie | 2 |
|  |  | raised | |  | |  |  | Ciflorette, Gariguette,  NF 421 | 3 |
| **38** | **(\*)** | **QN** | **VG** | **(+)** | **(d)** |  | | | |
|  |  | |  | | --- | | **Fruit: attitude of sepals** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | upwards | |  | |  |  | Gariguette | 1 |
|  |  | outwards | |  | |  |  | Altess, Lia, Osiris | 2 |
|  |  | downwards | |  | |  |  | Pink Extara | 3 |
| **39** | **(\*)** | **QN** | **VG** | **(+)** | **(d)** |  | | | |
|  |  | |  | | --- | | **Fruit: diameter of calyx in relation to diameter of fruit** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | much smaller | |  | |  |  | ct/bb xov170002 | 1 |
|  |  | slightly smaller | |  | |  |  | Lia, Tecla, Vivaldi | 2 |
|  |  | same size | |  | |  |  | Avarosa, Candiss, Cirano, Cupid, Daroyal | 3 |
|  |  | slightly larger | |  | |  |  | Gladis, Murano | 4 |
|  |  | much larger | |  | |  |  | ASF 2021, FF 1604 | 5 |
| **40** |  | **PQ** | **VG** | **(+)** | **(d)** |  | | | |
|  |  | |  | | --- | | **Fruit: color of flesh** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | whitish | |  | |  |  | Anablanca, BBB PO 01, Fontaine | 1 |
|  |  | light pink | |  | |  |  | Jukhyang | 2 |
|  |  | orange red | |  | |  |  | Elegance | 3 |
|  |  | light red | |  | |  |  | Majestic | 4 |
|  |  | medium red | |  | |  |  | Aprica, Malling Sunrise, NF 421 | 5 |
|  |  | dark red | |  | |  |  | Cijosée, Daroyal | 6 |

|  |  | English | | français | | deutsch | español | Example Varieties Exemples Beispielssorten Variedades ejemplo | Note/ Nota |
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| **41** |  | **PQ** | **VG** | **(+)** | **(d)** |  | | | |
|  |  | |  | | --- | | **Fruit: color of core** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | white | |  | |  |  | BBB PO 01, Pink Extara | 1 |
|  |  | light red | |  | |  |  | Elegance, Figaro, Toscana | 2 |
|  |  | medium red | |  | |  |  | Avarosa, Gladis, Murano | 3 |
|  |  | dark red | |  | |  |  | Malwina | 4 |
| **42** | **(\*)** | **QN** | **MG** | **(+)** |  |  | | | |
|  |  | |  | | --- | | **Time of beginning of flowering** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | very early | |  | |  |  | Lorette | 1 |
|  |  | very early to early | |  | |  |  | Avarosa, Murano, Starlette | 2 |
|  |  | early | |  | |  |  | Anabelle, Camarillo, Charlotte | 3 |
|  |  | early to medium | |  | |  |  | Evie 3, Sweet Eve | 4 |
|  |  | medium | |  | |  |  | Gorella, Hansawhit, Osiris, Velvet | 5 |
|  |  | medium to late | |  | |  |  | Avamaria, Driscoll Jubilee | 6 |
|  |  | late | |  | |  |  | Laetitia, Rinia | 7 |
|  |  | late to very late | |  | |  |  | Filicia, Finesse, Florin, Sussette | 8 |
|  |  | very late | |  | |  |  | Judibell, Malwina | 9 |
| **43** | **(\*)** | **QN** | **MG** | **(+)** |  |  | | | |
|  |  | |  | | --- | | **Time of beginning of fruit ripening** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | very early | |  | |  |  | Flair, Lorette,  Sweet Charlie | 1 |
|  |  | very early to early | |  | |  |  | Avarosa, Honeoye, Julyana, Murano | 2 |
|  |  | early | |  | |  |  | Altess, CF 4402, Deluxe, Drisstrawfive, Floriante, Verity | 3 |
|  |  | early to medium | |  | |  |  | CF 6821, Cirafine, Evita, Gorella, Pink Extara, Senga Sengana | 4 |
|  |  | medium | |  | |  |  | Cijosée, Cupid, Gladis, Malling Opal, Velvet | 5 |
|  |  | medium to late | |  | |  |  | Bolero, Faith, Laetitia, Marionnet 100 | 6 |
|  |  | late | |  | |  |  | Flamenco, Yamaska | 7 |
|  |  | late to very late | |  | |  |  | Finesse, Seascape, Sophie, Sussette | 8 |
|  |  | very late | |  | |  |  | GH 75, Judibell, Malwina | 9 |

|  |  | English | | français | | deutsch | español | Example Varieties Exemples Beispielssorten Variedades ejemplo | Note/ Nota |
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| **44** | **(\*)** | **QL** | **VG** |  |  |  | | | |
|  |  | |  | | --- | | **Flowering runners** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | absent | |  | |  |  | Elsanta | 1 |
|  |  | present | |  | |  |  | Aromas, Cirafine, Florika | 9 |

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| |  |  |  |  | | --- | --- | --- | --- | | 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 on the plant and leaf should be made on plants shortly before the beginning of fruit ripening.  Observations on the leaf should be made on fully-developed leaves. | | | | |  |  |  |  | | |  | | --- | | (b) | | |  | | --- | | Observations of the inflorescence (including the flower) should be made on plants when they are in full flower.  Unless otherwise indicated, observations on the flower should not be made on the terminal flower.  In the case of remontant varieties, the characteristics should be observed on the first flush of flowers. | | | | |  |  |  |  | | |  | | --- | | (c) | | |  | | --- | | Observations on the stipule and the stolon should be made after the end of bearing.  In case of day-neutral varieties the observations should be carried out at the same time, at the end of bearing of the non-remonting varieties. | | | | |  |  |  |  | | |  | | --- | | (d) | | |  | | --- | | Observations on the fruit should not be made on terminal fruits on one-year-old plants when picking ripe. | | | | |

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| |  |  | | --- | --- | |  | | | |  | | --- | | *8.2* | | *Explanations for individual characteristics* | |  | | | |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Ad. 1: Plant : growth habit   |  |  |  | | --- | --- | --- | | wordml://76.png | wordml://77.png | wordml://78.png | | 1 | 3 | 5 | | upright | semi-upright | spreading | | | | | |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Ad. 2: Plant: density of foliage   |  |  |  | | --- | --- | --- | | wordml://79.png | wordml://80.png | wordml://81.png | | 3 | 5 | 7 | | sparse | medium | dense | | | | | |  | | --- | | Ad. 3: Plant: vigor  The plant vigor should be considered as the overall abundance of vegetative growth. In particular it is related to height and diameter of the plant. | | | | |  | | --- | | Ad. 6: Stolon: intensity of anthocyanin coloration  The anthocyanin coloration should be observed on the middle third of the stolon. | | | |

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| |  |  | | --- | --- | | |  | | --- | | Ad. 7: Leaf: size  The size of leaf excludes the petiole and stipules.  wordml://82.png | | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Ad. 9: Leaf: rugosity   |  |  |  | | --- | --- | --- | | wordml://83.png | wordml://84.png | wordml://85.png | | 1 | 2 | 3 | | absent or very weak | weak | medium |      |  |  | | --- | --- | | wordml://86.png | wordml://87.png | | 4 | 5 | | strong | very strong | | | | |  | | --- | | Ad. 10: Leaf: glossiness  Observations should be made on the upper side of the leaf. | | | |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Ad. 12: Terminal leaflet: shape of base     |  |  |  | | --- | --- | --- | | wordml://88.png | wordml://89.png | wordml://90.png | | 1 | 2 | 3 | | acute | obtuse | rounded | | | |

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| |  |  | | --- | --- | | |  | | --- | | Ad. 16: Petiole: length  wordml://98.png | | | |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Ad. 17: Petiole: attitude of hairs   |  |  |  |  | | --- | --- | --- | --- | | wordml://99.png | wordml://100.png | wordml://101.png | wordml://102.png | | 1 | 2 | 3 | 4 | | adpressed | upwards | outwards | downwards | | | | |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Ad. 20: Flower: arrangement of petals   |  |  |  | | --- | --- | --- | | wordml://103.png | wordml://104.png | wordml://105.png | | 1 | 2 | 3 | | free | touching | overlapping | | | |

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| |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Ad. 38: Fruit: attitude of sepals     |  |  |  | | --- | --- | --- | | wordml://146.png | wordml://147.png | wordml://148.png | | 1 | 2 | 3 | | upwards | outwards | downwards | | | | |  | | --- | | Ad. 39: Fruit: diameter of calyx in relation to diameter of fruit  The diameter of calyx is assessed with the sepals held flat. | | | |  | | --- | | Ad. 40: Fruit: color of flesh  Observations should be made excluding the core.  wordml://149.png | | | |  | | --- | | Ad. 41: Fruit: color of core  See Ad. 40. | | |

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| |  |  | | --- | --- | | |  | | --- | | Ad. 42: Time of beginning of flowering  The time of beginning of flowering is when 50% of plants show at least 1 open flower. | | | |  | | --- | | Ad. 43: Time of beginning of fruit ripening  The time of beginning of fruit ripening is when 50 % of plants provide of at least one fully colored fruit. | | |
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| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  |  | | --- | --- | | 9. | Literature | | |  |  |  | | --- | | Bundessortenamt (ed.), 2015:  Beschreibende Sortenliste Erdbeeren. Landbuch Verlag, Hannover, DE, 128 pp.    Centre technique interprofessionnel des fruits et légumes (ed.), 1997: La fraise - Plant et variétés. Paris, FR, 103 pp.    Groupe d'Étude de contrôle des variétés et des Semences (GEVES), 2003: Les Variétés de Fraisier - anciennes, actuelles, nouvelles (CD-ROM). La Miniére, FR.  Istituto Sperimentale per la Frutticoltura, 2002: Monografia di cultivar di fragola, Roma, 291 pp.    Japan Seed Trade Association, 1978:  The report on the characterization and classification of strawberry varieties, Japan Seed Trade Association, Tokyo (by consignment of the MAFF), JP, 20 pp. | | |

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| --- | --- | --- |
| |  |  | | --- | --- | | 10. | Technical Questionnaire | |
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| |  |  |  | | --- | --- | --- | | 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 | |  | | --- | | *Fragaria* L. | | |  | | --- | |  | | |  |  |  |  |  | |  | |  | | --- | | 1.2 | | Common name | |  | | --- | | Strawberry | |  | |  |  |  | |  | | --- | |  | |  | |  |  |  |  |  | |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  |  |  |  | | 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) | [ ] | |  |  | | |  |  | | | | | | |

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| |  |  |  | | --- | --- | --- | |  |  |  | |  | 4.2 | Method of propagating the variety | |  | |  |  |  | | --- | --- | --- | | |  | | --- | | 4.2.1 | | |  | | --- | | Vegetative propagation | |  | | |  | | --- | | (a) | | |  | | --- | | *In vitro* propagation | | [ ] | | |  | | --- | | (b) | | |  | | --- | | runners | | [ ] | | |  | | --- | | (c) | | |  | | --- | | Other (state method) | | [ ] | |  |  |  | |  |  |  | |  |  |  | | |  | | --- | | 4.2.2 | | Other (Please provide details) | [ ] | |  |  |  | |  |  |  | |  |  |  | | | |  | |  |  | | --- | --- | | |  | | --- | |  | | | | |

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

|  | Characteristics | Example Varieties | Note |
| --- | --- | --- | --- |
|  |  |  |  |
| |  | | --- | | **5.1** |  |  | | --- | | **(1)** | | |  | | --- | | **Plant : growth habit** | |  |  |
|  | |  | | --- | | upright | | |  | | --- | | Vibrant | | |  | | --- | | 1 [   ] | |
|  | |  | | --- | | upright to semi-upright | | |  | | --- | | Korona | | |  | | --- | | 2 [   ] | |
|  | |  | | --- | | semi-upright | | |  | | --- | | Senga Sengana | | |  | | --- | | 3 [   ] | |
|  | |  | | --- | | semi-upright to spreading | | |  | | --- | | Weiße Ananas | | |  | | --- | | 4 [   ] | |
|  | |  | | --- | | spreading | | |  | | --- | | Lucida Perfecta | | |  | | --- | | 5 [   ] | |
|  |  |  |  |
|  |  |  |  |
| |  | | --- | | **5.2** |  |  | | --- | | **(7)** | | |  | | --- | | **Leaf: size** | |  |  |
|  | |  | | --- | | very small | | |  | | --- | |  | | |  | | --- | | 1 [   ] | |
|  | |  | | --- | | very small to small | | |  | | --- | |  | | |  | | --- | | 2 [   ] | |
|  | |  | | --- | | small | | |  | | --- | | Fontaine | | |  | | --- | | 3 [   ] | |
|  | |  | | --- | | small to medium | | |  | | --- | | Sans Rivale, Toscana | | |  | | --- | | 4 [   ] | |
|  | |  | | --- | | medium | | |  | | --- | | Gorella, Korona, Senga Sengana | | |  | | --- | | 5 [   ] | |
|  | |  | | --- | | medium to large | | |  | | --- | | Elsanta, Honeoye, Salsa | | |  | | --- | | 6 [   ] | |
|  | |  | | --- | | large | | |  | | --- | | Aprica, Darselect | | |  | | --- | | 7 [   ] | |
|  | |  | | --- | | large to very large | | |  | | --- | | Merkur, Ramir | | |  | | --- | | 8 [   ] | |
|  | |  | | --- | | very large | | |  | | --- | |  | | |  | | --- | | 9 [   ] | |
|  |  |  |  |
|  |  |  |  |
| |  | | --- | | **5.3** |  |  | | --- | | **(17)** | | |  | | --- | | **Petiole: attitude of hairs** | |  |  |
|  | |  | | --- | | adpressed | | |  | | --- | | Elianny, Vivara | | |  | | --- | | 1 [   ] | |
|  | |  | | --- | | upwards | | |  | | --- | | Darselect, Elsanta | | |  | | --- | | 2 [   ] | |
|  | |  | | --- | | outwards | | |  | | --- | | Albion, Filicia, Malwina | | |  | | --- | | 3 [   ] | |
|  | |  | | --- | | downwards | | |  | | --- | | to be provided | | |  | | --- | | 4 [   ] | |
|  |  |  |  |

|  | Characteristics | Example Varieties | Note |
| --- | --- | --- | --- |
|  |  |  |  |
| |  | | --- | | **5.4** |  |  | | --- | | **(19)** | | |  | | --- | | **Flower: diameter** | |  |  |
|  | |  | | --- | | very small | | |  | | --- | |  | | |  | | --- | | 1 [   ] | |
|  | |  | | --- | | very small to small | | |  | | --- | | Fontaine | | |  | | --- | | 2 [   ] | |
|  | |  | | --- | | small | | |  | | --- | | Darestivale, Sans Rivale | | |  | | --- | | 3 [   ] | |
|  | |  | | --- | | small to medium | | |  | | --- | | Majestic, Mara des Bois, Senga Sengana, Yamaska | | |  | | --- | | 4 [   ] | |
|  | |  | | --- | | medium | | |  | | --- | | Bogota, Elsanta, Everest, Korona | | |  | | --- | | 5 [   ] | |
|  | |  | | --- | | medium to large | | |  | | --- | | Camarosa, Chandler, Darselect | | |  | | --- | | 6 [   ] | |
|  | |  | | --- | | large | | |  | | --- | | Cambridge Favourite, Ines | | |  | | --- | | 7 [   ] | |
|  | |  | | --- | | large to very large | | |  | | --- | |  | | |  | | --- | | 8 [   ] | |
|  | |  | | --- | | very large | | |  | | --- | | SG 0203 | | |  | | --- | | 9 [   ] | |
|  |  |  |  |
|  |  |  |  |
| |  | | --- | | **5.5** |  |  | | --- | | **(21)** | | |  | | --- | | **Flower: size of calyx in relation to corolla** | |  |  |
|  | |  | | --- | | smaller | | |  | | --- | | Jussara, Toscana | | |  | | --- | | 1 [   ] | |
|  | |  | | --- | | same size | | |  | | --- | | Filicia, Gladis | | |  | | --- | | 2 [   ] | |
|  | |  | | --- | | larger | | |  | | --- | | Camarosa, Candiss, Everest | | |  | | --- | | 3 [   ] | |
|  |  |  |  |
|  |  |  |  |
| |  | | --- | | **5.6** |  |  | | --- | | **(25)** | | |  | | --- | | **Petal: color of upper side** | |  |  |
|  | |  | | --- | | greenish white | | |  | | --- | |  | | |  | | --- | | 1 [   ] | |
|  | |  | | --- | | white | | |  | | --- | | Gariguette | | |  | | --- | | 2 [   ] | |
|  | |  | | --- | | light pink | | |  | | --- | | Marajox, Pikan | | |  | | --- | | 3 [   ] | |
|  | |  | | --- | | medium pink | | |  | | --- | | Frel | | |  | | --- | | 4 [   ] | |
|  | |  | | --- | | dark pink | | |  | | --- | | Tarpan | | |  | | --- | | 5 [   ] | |
|  | |  | | --- | | red | | |  | | --- | |  | | |  | | --- | | 6 [   ] | |
|  |  |  |  |
|  |  |  |  |
| |  | | --- | | **5.7** |  |  | | --- | | **(26)** | | |  | | --- | | **Fruit: length in relation to diameter** | |  |  |
|  | |  | | --- | | very low | | |  | | --- | | Mieze Schindler | | |  | | --- | | 1 [   ] | |
|  | |  | | --- | | low | | |  | | --- | | Lia, Sussette | | |  | | --- | | 2 [   ] | |
|  | |  | | --- | | medium | | |  | | --- | | Gorella, Honeoye | | |  | | --- | | 3 [   ] | |
|  | |  | | --- | | high | | |  | | --- | | Malling Centenary, Osiris | | |  | | --- | | 4 [   ] | |
|  | |  | | --- | | very high | | |  | | --- | | Pantagruella | | |  | | --- | | 5 [   ] | |
|  |  |  |  |

|  | Characteristics | Example Varieties | Note |
| --- | --- | --- | --- |
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| |  | | --- | | **5.8** |  |  | | --- | | **(27)** | | |  | | --- | | **Fruit: size** | |  |  |
|  | |  | | --- | | very small | | |  | | --- | | Rosa Perle, Ulrichsburg | | |  | | --- | | 1 [   ] | |
|  | |  | | --- | | very small to small | | |  | | --- | | Fontaine | | |  | | --- | | 2 [   ] | |
|  | |  | | --- | | small | | |  | | --- | | abz v 32, Linne | | |  | | --- | | 3 [   ] | |
|  | |  | | --- | | small to medium | | |  | | --- | | Toscana, Weiße Ananas | | |  | | --- | | 4 [   ] | |
|  | |  | | --- | | medium | | |  | | --- | | BBB PO 01, Sans Rivale | | |  | | --- | | 5 [   ] | |
|  | |  | | --- | | medium to large | | |  | | --- | | Finesse, MA 65 | | |  | | --- | | 6 [   ] | |
|  | |  | | --- | | large | | |  | | --- | | Altess, Lia | | |  | | --- | | 7 [   ] | |
|  | |  | | --- | | large to very large | | |  | | --- | | Albion, Verity | | |  | | --- | | 8 [   ] | |
|  | |  | | --- | | very large | | |  | | --- | |  | | |  | | --- | | 9 [   ] | |
|  |  |  |  |
|  |  |  |  |
| |  | | --- | | **5.9** |  |  | | --- | | **(28)** | | |  | | --- | | **Fruit: shape** | |  |  |
|  | |  | | --- | | reniform | | |  | | --- | | Jumbo | | |  | | --- | | 1 [   ] | |
|  | |  | | --- | | conical | | |  | | --- | | Albion, Clery, Everest, Matis, Murano, Sweet Charlie | | |  | | --- | | 2 [   ] | |
|  | |  | | --- | | cordate | | |  | | --- | | Malling Champion | | |  | | --- | | 3 [   ] | |
|  | |  | | --- | | ovate | | |  | | --- | | Quarantaine de Prin | | |  | | --- | | 4 [   ] | |
|  | |  | | --- | | oblong | | |  | | --- | |  | | |  | | --- | | 5 [   ] | |
|  | |  | | --- | | rhombic | | |  | | --- | | Lumotar | | |  | | --- | | 6 [   ] | |
|  | |  | | --- | | oblate | | |  | | --- | | BBB PO 01 | | |  | | --- | | 7 [   ] | |
|  | |  | | --- | | circular | | |  | | --- | | Florika | | |  | | --- | | 8 [   ] | |
|  | |  | | --- | | wedged | | |  | | --- | | Konia | | |  | | --- | | 9 [   ] | |
|  |  |  |  |
|  |  |  |  |
| |  | | --- | | **5.10** |  |  | | --- | | **(32)** | | |  | | --- | | **Fruit: color** | |  |  |
|  | |  | | --- | | pinkish white | | |  | | --- | | Weiße Ananas | | |  | | --- | | 1 [   ] | |
|  | |  | | --- | | yellowish white | | |  | | --- | | Lucida Perfecta | | |  | | --- | | 2 [   ] | |
|  | |  | | --- | | light orange | | |  | | --- | | Merton Dawn | | |  | | --- | | 3 [   ] | |
|  | |  | | --- | | medium orange | | |  | | --- | | Cambridge Favourite | | |  | | --- | | 4 [   ] | |
|  | |  | | --- | | orange red | | |  | | --- | | Gorella | | |  | | --- | | 5 [   ] | |
|  | |  | | --- | | pink | | |  | | --- | |  | | |  | | --- | | 6 [   ] | |
|  | |  | | --- | | light red | | |  | | --- | |  | | |  | | --- | | 7 [   ] | |
|  | |  | | --- | | medium red | | |  | | --- | | Elsanta, Royal Sovereign, Sweet Charlie | | |  | | --- | | 8 [   ] | |
|  | |  | | --- | | dark red | | |  | | --- | | Honeoye, Seascape, Senga Sengana | | |  | | --- | | 9 [   ] | |
|  | |  | | --- | | blackish red | | |  | | --- | | Arista | | |  | | --- | | 10 [   ] | |
|  |  |  |  |

|  | Characteristics | Example Varieties | Note |
| --- | --- | --- | --- |
|  |  |  |  |
| |  | | --- | | **5.11** |  |  | | --- | | **(34)** | | |  | | --- | | **Fruit: position of achenes** | |  |  |
|  | |  | | --- | | strongly below surface | | |  | | --- | | Mieze Schindler | | |  | | --- | | 1 [   ] | |
|  | |  | | --- | | slightly below surface | | |  | | --- | | Albion, Kimberley | | |  | | --- | | 2 [   ] | |
|  | |  | | --- | | level with surface | | |  | | --- | | Malling Centenary, Osiris | | |  | | --- | | 3 [   ] | |
|  | |  | | --- | | above surface | | |  | | --- | | Alice, Frugodi, Toscana | | |  | | --- | | 4 [   ] | |
|  |  |  |  |
|  |  |  |  |
| |  | | --- | | **5.12** |  |  | | --- | | **(37)** | | |  | | --- | | **Fruit: position of calyx attachment** | |  |  |
|  | |  | | --- | | inserted | | |  | | --- | | Finesse | | |  | | --- | | 1 [   ] | |
|  | |  | | --- | | level with fruit | | |  | | --- | | Lia, Murano, Senga Sengana, Sweet Charlie | | |  | | --- | | 2 [   ] | |
|  | |  | | --- | | raised | | |  | | --- | | Ciflorette, Gariguette, NF 421 | | |  | | --- | | 3 [   ] | |
|  |  |  |  |
|  |  |  |  |
| |  | | --- | | **5.13** |  |  | | --- | | **(38)** | | |  | | --- | | **Fruit: attitude of sepals** | |  |  |
|  | |  | | --- | | upwards | | |  | | --- | | Gariguette | | |  | | --- | | 1 [   ] | |
|  | |  | | --- | | outwards | | |  | | --- | | Altess, Lia, Osiris | | |  | | --- | | 2 [   ] | |
|  | |  | | --- | | downwards | | |  | | --- | | Pink Extara | | |  | | --- | | 3 [   ] | |
|  |  |  |  |
|  |  |  |  |
| |  | | --- | | **5.14** |  |  | | --- | | **(39)** | | |  | | --- | | **Fruit: diameter of calyx in relation to diameter of fruit** | |  |  |
|  | |  | | --- | | much smaller | | |  | | --- | | ct/bb xov170002 | | |  | | --- | | 1 [   ] | |
|  | |  | | --- | | slightly smaller | | |  | | --- | | Lia, Tecla, Vivaldi | | |  | | --- | | 2 [   ] | |
|  | |  | | --- | | same size | | |  | | --- | | Avarosa, Candiss, Cirano, Cupid, Daroyal | | |  | | --- | | 3 [   ] | |
|  | |  | | --- | | slightly larger | | |  | | --- | | Gladis, Murano | | |  | | --- | | 4 [   ] | |
|  | |  | | --- | | much larger | | |  | | --- | | ASF 2021, FF 1604 | | |  | | --- | | 5 [   ] | |
|  |  |  |  |
|  |  |  |  |
| |  | | --- | | **5.15** |  |  | | --- | | **(42)** | | |  | | --- | | **Time of beginning of flowering** | |  |  |
|  | |  | | --- | | very early | | |  | | --- | | Lorette | | |  | | --- | | 1 [   ] | |
|  | |  | | --- | | very early to early | | |  | | --- | | Avarosa, Murano, Starlette | | |  | | --- | | 2 [   ] | |
|  | |  | | --- | | early | | |  | | --- | | Anabelle, Camarillo, Charlotte | | |  | | --- | | 3 [   ] | |
|  | |  | | --- | | early to medium | | |  | | --- | | Evie 3, Sweet Eve | | |  | | --- | | 4 [   ] | |
|  | |  | | --- | | medium | | |  | | --- | | Gorella, Hansawhit, Osiris, Velvet | | |  | | --- | | 5 [   ] | |
|  | |  | | --- | | medium to late | | |  | | --- | | Avamaria, Driscoll Jubilee | | |  | | --- | | 6 [   ] | |
|  | |  | | --- | | late | | |  | | --- | | Laetitia, Rinia | | |  | | --- | | 7 [   ] | |
|  | |  | | --- | | late to very late | | |  | | --- | | Filicia, Finesse, Florin, Sussette | | |  | | --- | | 8 [   ] | |
|  | |  | | --- | | very late | | |  | | --- | | Judibell, Malwina | | |  | | --- | | 9 [   ] | |
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|  | Characteristics | Example Varieties | Note |
| --- | --- | --- | --- |
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| |  | | --- | | **5.16** |  |  | | --- | | **(43)** | | |  | | --- | | **Time of beginning of fruit ripening** | |  |  |
|  | |  | | --- | | very early | | |  | | --- | | Flair, Lorette, Sweet Charlie | | |  | | --- | | 1 [   ] | |
|  | |  | | --- | | very early to early | | |  | | --- | | Avarosa, Honeoye, Julyana, Murano | | |  | | --- | | 2 [   ] | |
|  | |  | | --- | | early | | |  | | --- | | Altess, CF 4402, Deluxe, Drisstrawfive, Floriante, Verity | | |  | | --- | | 3 [   ] | |
|  | |  | | --- | | early to medium | | |  | | --- | | CF 6821, Cirafine, Evita, Gorella, Pink Extara, Senga Sengana | | |  | | --- | | 4 [   ] | |
|  | |  | | --- | | medium | | |  | | --- | | Cijosée, Cupid, Gladis, Malling Opal, Velvet | | |  | | --- | | 5 [   ] | |
|  | |  | | --- | | medium to late | | |  | | --- | | Bolero, Faith, Laetitia, Marionnet 100 | | |  | | --- | | 6 [   ] | |
|  | |  | | --- | | late | | |  | | --- | | Flamenco, Yamaska | | |  | | --- | | 7 [   ] | |
|  | |  | | --- | | late to very late | | |  | | --- | | Finesse, Seascape, Sophie, Sussette | | |  | | --- | | 8 [   ] | |
|  | |  | | --- | | very late | | |  | | --- | | GH 75, Judibell, Malwina | | |  | | --- | | 9 [   ] | |
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| |  | | --- | | **5.17** |  |  | | --- | | **(44)** | | |  | | --- | | **Flowering runners** | |  |  |
|  | |  | | --- | | absent | | |  | | --- | | Elsanta | | |  | | --- | | 1 [   ] | |
|  | |  | | --- | | present | | |  | | --- | | Aromas, Cirafine, Florika | | |  | | --- | | 9 [   ] | |
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| |  |  |  | | --- | --- | --- | | TECHNICAL QUESTIONNAIRE | Page {x} of {y} | Reference Number: | |
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| |  |  | | --- | --- | | 6. | Similar varieties and differences from these varieties | | |  | | --- | | *Please use the following table and box for comments to provide information on how your candidate variety differs from the variety (or varieties) which, to the best of your knowledge, is (or are) most similar. This information may help the examination authority to conduct its examination of distinctness in a more efficient way.* | | | | |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | | Denomination(s) of variety(ies) similar to your candidate variety | | |  | | --- | | Characteristic(s) in which your candidate variety differs from the similar variety(ies) | | |  | | --- | | Describe the expression of the characteristic(s) for the **similar** variety(ies) | | |  | | --- | | Describe the expression of the characteristic(s) for **your** candidate variety | | | | | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | *Example* | |  | | --- | | *Fruit: color of flesh* | | |  | | --- | | *orange red* | | |  | | --- | | *dark red* | | |  |  |  |  | |  |  |  |  | |  |  |  |  | | | |  | Comments: | |

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| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  | | --- | | #7. | | Additional information which may help in the examination of the variety | | | | |  |  |  | | | | 7.1 | In addition to the information provided in sections 5 and 6, are there any additional characteristics which may help to distinguish the variety? | | | | |  | Yes | [ ] | No | [ ] | |  | (If yes, please provide details) | | | | | 7.2 | Are there any special conditions for growing the variety or conducting the examination? | | | | |  | Yes | [ ] | No | [ ] | |  | (If yes, please provide details) | | | | | 7.3 | Other information | | | | |  |  |  |  |  | | A representative color photograph of the variety displaying its main distinguishing feature(s), should accompany the Technical Questionnaire. The photograph will provide a visual illustration of the candidate variety which supplements the information provided in the Technical Questionnaire.   The key points to consider when taking a photograph of the candidate variety are:  • Indication of the date and geographic location • Correct labeling (breeder’s reference) • Good quality printed photograph (minimum 10 cm x 15 cm) and/or sufficient resolution electronic format version (minimum 960 x 1280 pixels)”  Further guidance on providing photographs with the Technical Questionnaire is available in document TGP/7 "Development of Test Guidelines", Guidance Note 35 (http://www.upov.int/tgp/en/).  [The link provided may be deleted by members of the Union when developing authorities’ own test guidelines.] | | | | | | |  | | --- | | Additional information on the bearing type.  The variety is      not remontant            [   ]      partially remontant     [   ]      fully remontant           [   ]      under the following growing conditions:      - temperature \_\_\_\_\_\_ °C      - day length    \_\_\_\_\_\_  h  Additional information on chilliing requirements  - Indicate the minimum number of chilling hours:    \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ hours | | | | | | |  |  |  |  |  | |

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| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | 8. | Authorization for release | | | | | |  | (a) | Does the variety require prior authorization for release under legislation concerning the protection of the environment, human and animal health? | | | | |  |  | Yes | [ ] | No | [ ] | |  | (b) | Has such authorization been obtained? | | | | |  |  | Yes | [ ] | No | [ ] | |  | If the answer to (b) is yes, please attach a copy of the authorization. | | | | | |  |  |  |  |  |  | |
| |  |  | | --- | --- | | |  | | --- | | 9. Information on plant material to be examined or submitted for examination | | |  | | 9.1 The expression of a characteristic or several characteristics of a variety may be affected by factors, such as pests and disease, chemical treatment (e.g. growth retardants or pesticides), effects of tissue culture, different rootstocks, scions taken from different growth phases of a tree, etc. | |  | | |  | | --- | | 9.2 The plant material should not have undergone any treatment which would affect the expression of the characteristics of the variety, unless the competent authorities allow or request such treatment. If the plant material has undergone such treatment, full details of the treatment must be given. In this respect, please indicate below, to the best of your knowledge, if the plant material to be examined has been subjected to: | | | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | |  | (a) | Microorganisms (e.g. virus, bacteria, phytoplasma) | Yes [ ] | No [ ] |  | |  | (b) | Chemical treatment (e.g. growth retardant, pesticide) | Yes [ ] | No [ ] |  | |  | (c) | Tissue culture | Yes [ ] | No [ ] |  | |  | (d) | Other factors | Yes [ ] | No [ ] |  | |  | Please provide details for where you have indicated “yes”. | | | |  | |  |  | | | |  | | |  | | |  | | --- | | 9.3 Has the plant material to be examined been tested for the presence of virus or other pathogens? | | | |  |  |  | | --- | --- | --- | |  | Yes | [ ] | |  | (please provide details as specified by the Authority) | | |  | No | [ ] | | |  | |
| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | 10. | I hereby declare that, to the best of my knowledge, the information provided in this form is correct: | | | | | |  |  |  |  |  |  | |  |  |  | | |  | |  | Applicant’s name |  | |  |  |  |  |  |  | |  | Signature |  | Date |  |  | |  |  |  | |  |  | |  |  |  |  |  |  | |
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