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|  |  | |  | | --- | | **TG/76/9(proj.1)** | | **ORIGINAL:** English | | **DATE:** 2019-04-05 | |
| **INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS** | | |
|  | Geneva |  |
|  | |  |  |  | | --- | --- | --- | |  |  |  | |  | DRAFT |  | |  |  |  | |  |
|  |  |  |
|  | |  | | --- | |  | | **SWEET PEPPER, HOT PEPPER, PAPRIKA, CHILI** | |  | | |  | | --- | |  | | |  | | --- | | UPOV Code(s):  CAPSI\_ANN | | |  | | |  | | |  |  | | --- | --- | | |  | | --- | | *Capsicum annuum* L. | | | |  | | |  | | --- | | \* | |
|  |  |  |
| |  | | --- | | **GUIDELINES** | |  | | **FOR THE CONDUCT OF TESTS** | |  | | **FOR DISTINCTNESS, UNIFORMITY AND STABILITY** | | | |
|  |  |  |
| |  | | --- | | *prepared by experts from the Netherlands* | | *to be considered by the* | | |  | | --- | | *Technical Working Party for Vegetables* | | | *at its fifty-third session, to be held in Seoul, Republic of Korea,* | | |  | | --- | | *from 2019-05-20 to 2019-05-24* | | | | |
| *Disclaimer: this document does not represent UPOV policies or guidance* | | |
| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  | | --- | | Alternative names:\* | | | | | | | *Botanical name* | *English* | *French* | *German* | *Spanish* | | |  | | --- | | *Capsicum annuum* L. | | |  | | --- | | Sweet Pepper, Hot Pepper, Paprika, Chili | | |  | | --- | | Piment, Poivron | | |  | | --- | | Paprika | | |  | | --- | | Aji, Chile, Pimiento | | | | |
|  |  |  |
| The purpose of these guidelines (“Test Guidelines”) is to elaborate the principles contained in the General Introduction (document TG/1/3), and its associated TGP documents, into detailed practical guidance for the harmonized examination of distinctness, uniformity and stability (DUS) and, in particular, to identify appropriate characteristics for the examination of DUS and production of harmonized variety descriptions. | | |
|  |  |  |
| **ASSOCIATED DOCUMENTS** | | |
| These Test Guidelines should be read in conjunction with the General Introduction and its associated TGP documents. | | |

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| 1. | Subject of these Test Guidelines |
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|  | |  | | --- | | These Test Guidelines apply to all varieties of *Capsicum annuum* L. including rootstocks and ornamentals.  In the case of ornamental varieties**,** in particular, it may be necessary to use additional characteristics or additional states of expression to those included in the Table of Characteristics in order to examine Distinctness, Uniformity and Stability. | |

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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 seed or plants. | |
|  |  |
| 2.3 | |  | | --- | | The minimum quantity of plant material, to be supplied by the applicant, should be: | |
|  |  |
|  | |  | | --- | | (a)    seed propagated varieties:               2,500 seeds  (b)   vegetatively propagated varieties:     25 non grafted young plants without fruits, plant height 20‑40 cm, at least 2 growing points per plant. For testing of resistance characteristics, additional plants may be required. | |
|  |  |
|  | 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 two separate plantings. | |
|  |  | |
| |  | | --- | | 3.1.3 | | |  | | --- | | For vegetatively propagated varieties the minimum duration of test should normally be a single growing cycle. In case additional growing cycle is necessary the plants might be propagated. | | |
|  |  | |
| *3.2* | *Testing Place* | |
|  |  | |
|  | Tests are normally conducted at one place. In the case of tests conducted at more than one place, guidance is provided in TGP/9 “Examining Distinctness”. | |
|  |  | |
| *3.3* | *Conditions for Conducting the Examination* | |
|  |  | |
| |  | | --- | |  | | The tests should be carried out under conditions ensuring satisfactory growth for the expression of the relevant characteristics of the variety and for the conduct of the examination. | |
|  |  | |
| *3.4* | *Test Design* | |
|  |  | |
| 3.4.1 | |  | | --- | | Each test should be designed to result in a total of at least 20 plants, which should be divided between at least 2 replicates. | | |
|  |  | |

|  |  |  |  |
| --- | --- | --- | --- |
| |  | | --- | | 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. | |
|  |  |

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| --- | --- | --- |
| |  | | --- | |  |   *3.5* | *Additional Tests* |
|  |  |
|  | Additional tests, for examining relevant characteristics, may be established. |

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| 4. | Assessment of Distinctness, Uniformity and Stability |
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|  |  |
| *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 | |
|  | |  | | --- | |  | | |  | | --- | | In the case of seed-propagated varieties, unless otherwise indicated, for the purposes of distinctness, all observations on single plants should be made on 20 plants or parts taken from each of 20 plants and any other observation made on all plants in the test, disregarding any off-type plants. | | |  | | |  | | --- | | In the case of vegetatively propagated varieties, unless otherwise indicated, for the purposes of distinctness, all observations on single plants should be made on 20 plants or parts taken from each of 20 plants and any other observation 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 seed-propagated varieties. For varieties with other types of propagation the recommendation 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 varieties should be according to the recommendations for cross-pollinated varieties in the General Introduction. |
|  |  |
| 4.2.4 | |  | | --- | | For the assessment of uniformity of cross-pollinated varieties, a population standard of 2% and an acceptance probability of at least 95% should be applied.  In the case of a sample size of 20 plants, 2 off-types are allowed. | |
|  |  |
| 4.2.5 | 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. |
|  |  |
| 4.2.6 | |  | | --- | | For the assessment of uniformity of hybrids, 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. | |
|  |  |
| 4.2.7 | |  | | --- | | 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 |
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| 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: shortened internodes (in upper part) (characteristic 4) | | | |  | | --- | | (b) | |  | |  | | --- | | Flower: anthocyanin coloration in anther (characteristic 22) | | | |  | | --- | | (c) | |  | |  | | --- | | Fruit: color (before maturity) (characteristic 24) | | | |  | | --- | | (d) | |  | |  | | --- | | Fruit: ratio length/diameter (characteristic 30) | | | |  | | --- | | (e) | |  | |  | | --- | | Fruit: shape in longitudinal section (characteristic 31) | | | |  | | --- | | (f) | |  | |  | | --- | | Fruit: color at maturity (characteristic 38) | | | |  | | --- | | (g) | |  | |  | | --- | | Fruit: number of locules (characteristic 43) | | | |  | | --- | | (h) | |  | |  | | --- | | Fruit: capsaicin in placenta (characteristic 45) | | | |  | | --- | | (i) | |  | |  | | --- | | Resistance to Tobamovirus - *Tobacco mosaic virus***-** Pathotype 0 (TMV: 0) (characteristic 51) | | | |  | | --- | | (j) | |  | |  | | --- | | Resistance to Tobamovirus - *Pepper mild mottle virus* - Pathotype 1.2 (PMMoV: 1.2) (characteristic 52) | | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | |  |  |  |  |  | | --- | --- | --- | --- | --- | | |  | | --- | | (k) | |  | |  | | --- | | Resistance to Tobamovirus - *Pepper mild mottle virus* - Pathotype 1.2.3 (PMMoV: 1.2.3) (characteristic 53) | | | |  | | --- | | (l) | |  | |  | | --- | | Resistance to *Potato Y virus* (PVY) - Pathotype 0 (PVY: 0) (characteristic 54) | | | |  | | --- | | (m) | |  | |  | | --- | | Resistance to *Tomato spotted wilt virus* Pathotype 0 (TSWV: 0) (characteristic 59) | | | |  |  | | --- | --- | | |  | | --- | |  | | | | | |
|  |  |
| 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 | In the case of qualitative and pseudo-qualitative characteristics (see Chapter 6.3), all relevant states of expression are presented in the characteristic. However, in the case of quantitative characteristics with 5 or more states, an abbreviated scale may be used to minimize the size of the Table of Characteristics. For example, in the case of a quantitative characteristic with 9 states, the presentation of states of expression in the Test Guidelines may be abbreviated as follows: |
|  | |  |  | | --- | --- | | *State* | *Note* | | small | 3 | | medium | 5 | | large | 7 | |
|  | However, it should be noted that all of the following 9 states of expression exist to describe varieties and should be used as appropriate: |
|  | |  |  | | --- | --- | | *State* | *Note* | | very small | 1 | | very small to small | 2 | | small | 3 | | small to medium | 4 | | medium | 5 | | medium to large | 6 | | large | 7 | | large to very large | 8 | | very large | 9 | |
|  |  |
| 6.2.3 | Further explanation of the presentation of states of expression and notes is provided in document TGP/7 “Development of Test Guidelines”. |
| *6.3* | *Types of Expression* |
|  | An explanation of the types of expression of characteristics (qualitative, quantitative and pseudo-qualitative) is provided in the General Introduction. |
| *6.4* | *Example Varieties* |
|  | Where appropriate, example varieties are provided to clarify the states of expression of each characteristic. |

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| *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)-(c) | | |  |  | | --- | --- | | |  | | --- | | 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: habit** | | | |  | | --- | | **Plante: port** | | | |  | | --- | | **Pflanze: Wuchsform** | | |  | | --- | | **Planta: porte** | |  |  |
|  |  | upright | | érigé | | aufrecht | erecto | De Cayenne, Doux très long des Landes, Piquant d’Algérie | 1 |
|  |  | semi-upright | | demi‑érigé | | halbaufrecht | semierecto | Sonar | 2 |
|  |  | prostrate | | étalé | | liegend | postrado |  | 3 |
| **2.** |  | **QN** | **MS/VG** | **(+)** | **(a)** |  | | | |
|  |  | |  | | --- | | **Plant: height** | | | |  | | --- | | **Plante: hauteur** | | | |  | | --- | | **Pflanze: Höhe** | | |  | | --- | | **Planta: altura** | |  |  |
|  |  | very short | | très basse | | sehr niedrig | muy baja |  | 1 |
|  |  | short | | basse | | niedrig | baja | Bravia | 3 |
|  |  | medium | | moyenne | | mittel | media | HRF | 5 |
|  |  | tall | | haute | | hoch | alta | Century | 7 |
|  |  | very tall | | très haute | | sehr hoch | muy alta | Brutus | 9 |
| **3.** |  | **QN** | **MS/VG** | **(+)** |  |  | | | |
|  |  | |  | | --- | | **Plant: length of stem** | | | |  | | --- | | **Plante: longueur de la tige** | | | |  | | --- | | **Pflanze: Länge des Stengels** | | |  | | --- | | **Planta: longitud del tallo** | |  |  |
|  |  | short | | courte | | kurz | corta | Bomenta, Corvinus | 3 |
|  |  | medium | | moyenne | | mittel | media | Bravia, Lamuyo, Nestoss, Remus | 5 |
|  |  | long | | longue | | lang | larga | Lipari, Marconi | 7 |
| **4.** | **(\*)** | **QL** | **VG** | **(+)** | **(a)** |  | | | |
|  |  | |  | | --- | | **Plant: shortened internodes (in upper part)** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | absent | |  | |  |  | California wonder, De Cayenne | 1 |
|  |  | present | |  | |  |  | Bucano | 9 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **5.** |  | **PQ** | **MS** | **(+)** | **(a)** |  | | | |
|  |  | |  | | --- | | **Varieties with shortened internodes only: Plant: number of internodes between the first flower and shortened internodes** | | | |  | | --- | | **Variétés à entre-nœuds raccourcis seulement: Plante: nombre d’entre-nœuds entre la première fleur et les entre-nœuds raccourcis** | | | |  | | --- | | **Nur Sorten mit verkürzten Internodien: Pflanze: Anzahl Internodien zwischen der ersten Blüte und den verkürzten Internodien** | | |  | | --- | | **Variedades con entrenudos acortados únicamente: Planta: número de entrenudos entre la primera flor y los entrenudos acortados** | |  |  |
|  |  | none | | aucun | | keine | ninguno |  | 1 |
|  |  | one to three | | un à trois | | eins bis drei | uno a tres |  | 2 |
|  |  | more than three | | plus de trois | | mehr als drei | más de tres |  | 3 |
|  |  | English | | français | | deutsch | español | Example Varieties Exemples Beispielssorten Variedades ejemplo | Note/ Nota |
| **6.** |  | **QN** | **MS/VG** | **(+)** | **(a)** |  | | | |
|  |  | |  | | --- | | **Varieties without shortened internodes only: Plant: length of internode (on primary side shoots)** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | very short | |  | |  |  | Albaregia | 1 |
|  |  | short | |  | |  |  | Tenor | 3 |
|  |  | medium | |  | |  |  | Florian | 5 |
|  |  | long | |  | |  |  | Corno di toro rosso | 7 |
|  |  | very long | |  | |  |  | Fenice | 9 |
| **7.** |  | **QN** | **VG** | **(+)** | **(a)** |  | | | |
|  |  | |  | | --- | | **Stem: intensity of anthocyanin coloration of nodes** | | | |  | | --- | | **Tige: intensité de la pigmentation anthocyanique des nœuds** | | | |  | | --- | | **Stengel: Intensität der Anthocyanfärbung der Knoten** | | |  | | --- | | **Tallo: intensidad de la pigmentación antociánica de los nudos** | |  |  |
|  |  | absent or very weak | |  | |  |  | Bravia, Nestoss, Remus | 1 |
|  |  | weak | | faible | | gering | débil | California wonder | 3 |
|  |  | medium | | moyenne | | mittel | media | Lamuyo, Sonar | 5 |
|  |  | strong | | forte | | stark | fuerte | Piquant d’Algérie | 7 |
|  |  | very strong | | très forte | | sehr stark | muy fuerte | Smolder | 9 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **8.** |  | **QN** | **VG** | **(+)** | **(a)** |  | | | |
|  |  | |  | | --- | | **Stem: hairiness of nodes** | | | |  | | --- | | **Tige: pilosité des nœuds** | | | |  | | --- | | **Stengel: Behaarung der Knoten** | | |  | | --- | | **Tallo: pilosidad de los nudos** | |  |  |
|  |  | absent or very weak | | nulle ou très faible | | fehlend oder sehr gering | ausente o muy débil | Arlequin | 1 |
|  |  | weak | | faible | | gering | débil | Bravia, Nestoss | 3 |
|  |  | medium | | moyenne | | mittel | media | Doux très long des Landes, Farnese | 5 |
|  |  | strong | | forte | | stark | fuerte | Fenice, Solario | 7 |
|  |  | very strong | | très forte | | sehr stark | muy fuerte | Brutus | 9 |
| **9.** |  | **QN** | **MS/VG** |  | **(a)** |  | | | |
|  |  | |  | | --- | | **Leaf: length of blade** | | | |  | | --- | | **Feuille: longueur du limbe** | | | |  | | --- | | **Blatt: Länge der Blattspreite** | | |  | | --- | | **Hoja: longitud del limbo** | |  |  |
|  |  | very short | | très courte | | sehr kurz | muy corta | Macska sárga | 1 |
|  |  | short | | courte | | kurz | corta | De Cayenne | 3 |
|  |  | medium | | moyenne | | mittel | media | Marconi | 5 |
|  |  | long | | longue | | lang | larga | Allrounder | 7 |
|  |  | very long | | très longue | | sehr lang | muy larga | Solario | 9 |

|  |  | English | | français | | deutsch | español | Example Varieties Exemples Beispielssorten Variedades ejemplo | Note/ Nota |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **10.** |  | **QN** | **MS/VG** |  | **(a)** |  | | | |
|  |  | |  | | --- | | **Leaf: width of blade** | | | |  | | --- | | **Feuille: largeur du limbe** | | | |  | | --- | | **Blatt: Breite der Blattspreitee** | | |  | | --- | | **Hoja: anchura del limbo** | |  |  |
|  |  | very narrow | | très étroite | | sehr schmal | muy estrecha | Macska sárga | 1 |
|  |  | narrow | | étroite | | schmal | estrecha | De Cayenne | 3 |
|  |  | medium | | moyenne | | mittel | media | Marconi | 5 |
|  |  | broad | | large | | breit | ancha | Allrounder | 7 |
|  |  | very broad | |  | |  |  | Solario | 9 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **11.** |  | **PQ** | **VG** | **(+)** | **(a)** |  | | | |
|  |  | |  | | --- | | **Leaf: shape** | | | |  | | --- | | **Feuille: forme** | | | |  | | --- | | **Blatt: Form** | | |  | | --- | | **Hoja: forma** | |  |  |
|  |  | lanceolate | | lancéolée | | lanzettlich | lanceolada | Brutus, De Cayenne | 1 |
|  |  | ovate | | ovale | | eiförmig | oval | Balico, Sonar | 2 |
|  |  | broad elliptic | | elliptique large | | breit elliptisch | elíptica ancha | Solario | 3 |
| **12.** |  | **QN** | **VG** |  | **(a)** |  | | | |
|  |  | |  | | --- | | **Leaf: intensity of green color** | | | |  | | --- | | **Feuille: intensité de la couleur verte** | | | |  | | --- | | **Blatt: Intensität der Grünfärbung** | | |  | | --- | | **Hoja: intensidad del color verde** | |  |  |
|  |  | very light | | très claire | | sehr hell | muy claro |  | 1 |
|  |  | light | | claire | | hell | claro |  | 3 |
|  |  | medium | | moyenne | | mittel | medio |  | 5 |
|  |  | dark | | foncée | | dunkel | oscuro |  | 7 |
|  |  | very dark | | très foncée | | sehr dunkel | muy oscuro |  | 9 |
| **13.** |  | **QN** | **VG** | **(+)** | **(a)** |  | | | |
|  |  | |  | | --- | | **Leaf: distribution of anthocyanin coloration of lower side** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | absent or very weak | |  | |  |  | Lamuyo | 1 |
|  |  | only on veins | |  | |  |  | Takiama Purple to Red | 2 |
|  |  | partially on veins and diffuse | |  | |  |  |  | 3 |
|  |  | on veins and partially diffuse | |  | |  |  | Black Pearl, Purple Flash | 4 |
|  |  | entirely | |  | |  |  | TF802 | 5 |

|  |  | English | | français | | deutsch | español | Example Varieties Exemples Beispielssorten Variedades ejemplo | Note/ Nota |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **14.** |  | **QN** | **VG** | **(+)** | **(a)** |  | | | |
|  |  | |  | | --- | | **Leaf: intensity of anthocyanin coloration of upper side** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | absent or very weak | |  | |  |  |  | 1 |
|  |  | weak | |  | |  |  | Omiyamurasaki, Purple Rain | 2 |
|  |  | medium | | faible | | schwach | baja | Calico | 3 |
|  |  | strong | |  | |  |  | Black Pearl | 4 |
|  |  | very strong | | moyenne | | mittel | media | Purple Flash, Takiama Purple to Red, TF802 | 5 |
| **15.** |  | **QL** | **VG** | **(+)** | **(a)** |  | | | |
|  |  | |  | | --- | | **Leaf blade: variegation** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | absent | | absente | | fehlend | ausente | Omiyamurasaki | 1 |
|  |  | present | | présente | | vorhanden | presente | Calico, Purple Rain | 9 |
| **16.** |  | **QN** | **VG** |  | **(a)** |  | | | |
|  |  | |  | | --- | | **Leaf: undulation of margin** | | | |  | | --- | | **Feuille: ondulation du bord** | | | |  | | --- | | **Blatt: Randwellung** | | |  | | --- | | **Hoja: ondulación del margen** | |  |  |
|  |  | absent or very weak | | nulle ou très faible | | fehlend oder sehr gering | ausente o muy débil | De Cayenne | 1 |
|  |  | weak | | faible | | gering | débil | Doux très long des Landes | 3 |
|  |  | medium | | moyenne | | mittel | media | Tenor | 5 |
|  |  | strong | | forte | | stark | fuerte | Tosca | 7 |
|  |  | very strong | | très forte | | sehr stark | muy fuerte |  | 9 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **17.** |  | **QN** | **VG** |  | **(a)** |  | | | |
|  |  | |  | | --- | | **Leaf: blistering** | | | |  | | --- | | **Feuille: cloqûre** | | | |  | | --- | | **Blatt: Blasigkeit** | | |  | | --- | | **Hoja: abullonado** | |  |  |
|  |  | very weak | | très faible | | sehr gering | muy débil | Brutus | 1 |
|  |  | weak | | faible | | gering | débil | Pusztagold | 3 |
|  |  | medium | | moyenne | | mittel | medio | Bravia, Nestoss | 5 |
|  |  | strong | | forte | | stark | fuerte | Greygo | 7 |
|  |  | very strong | | très forte | | sehr stark | muy fuerte | Florian | 9 |
| **18.** |  | **QN** | **VG** |  | **(a)** |  | | | |
|  |  | |  | | --- | | **Leaf: glossiness** | | | |  | | --- | | **Feuille: brillance** | | | |  | | --- | | **Blatt: Glanz** | | |  | | --- | | **Hoja: brillo** | |  |  |
|  |  | very weak | | très faible | | sehr gering | muy débil |  | 1 |
|  |  | weak | | faible | | gering | débil | Brutus, Doux très long des Landes | 3 |
|  |  | medium | | moyenne | | mittel | medio | Bravia | 5 |
|  |  | strong | | forte | | stark | fuerte | Floridor | 7 |
|  |  | very strong | | très forte | | sehr stark | muy fuerte |  | 9 |
|  |  | English | | français | | deutsch | español | Example Varieties Exemples Beispielssorten Variedades ejemplo | Note/ Nota |
| **19.** |  | **PQ** | **VG** | **(+)** |  |  | | | |
|  |  | |  | | --- | | **Peduncle: attitude** | | | |  | | --- | | **Pédoncule: port** | | | |  | | --- | | **Blütenstiel: Haltung** | | |  | | --- | | **Pedúnculo: porte** | |  |  |
|  |  | predominantly erect | |  | |  |  | Floridor | 1 |
|  |  | predominantly semi-drooping | |  | |  |  | Bravia | 2 |
|  |  | predominantly drooping | |  | |  |  | Brutus, Lamuyo | 3 |
| **20.** |  | **QN** | **VG** |  |  |  | | | |
|  |  | |  | | --- | | **Time of beginning of flowering (first flower on second flowering node)** | | | |  | | --- | | **Époque de début de floraison (première fleur au deuxième nœud florifère)** | | | |  | | --- | | **Zeitpunkt des Blühbeginns (erste Blüte am zweiten blütentragenden Knoten)** | | |  | | --- | | **Época de comienzo de la floración (primera flor en el segundo nudo floral)** | |  |  |
|  |  | early | | précoce | | früh | temprana | Brutus | 3 |
|  |  | medium | | moyenne | | mittel | media | Allrounder, Lamuyo | 5 |
|  |  | late | | tardive | | spät | tardía | Piquant d’Algérie | 7 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **21.** |  | **PQ** | **VG** |  |  |  | | | |
|  |  | |  | | --- | | **Flower: color** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | white | |  | |  |  |  | 1 |
|  |  | purple | |  | |  |  |  | 2 |
| **22.** | **(\*)** | **QL** | **VG** |  |  |  | | | |
|  |  | |  | | --- | | **Flower: anthocyanin coloration in anther** | | | |  | | --- | | **Fleur: pigmentation anthocyanique de l'anthère** | | | |  | | --- | | **Blüte: Anthocyanfärbung des Staubbeutels** | | |  | | --- | | **Flor: pigmentación antociánica de la antera** | |  |  |
|  |  | absent | | absente | | fehlend | ausente | Bravia | 1 |
|  |  | present | | présente | | vorhanden | presente | Brutus, Lamuyo | 9 |
| **23.** |  | **QL** | **VS** | **(+)** |  |  | | | |
|  |  | |  | | --- | | **Male sterility** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | absent | |  | |  |  |  | 1 |
|  |  | partially | |  | |  |  |  | 2 |
|  |  | present | |  | |  |  |  | 3 |
| **24.** | **(\*)** | **PQ** | **VG** |  | **(b)** |  | | | |
|  |  | |  | | --- | | **Fruit: color (before maturity)** | | | |  | | --- | | **Fruit: couleur (avant maturité)** | | | |  | | --- | | **Frucht: Farbe (vor der Reife)** | | |  | | --- | | **Fruto: color (antes de la madurez)** | |  |  |
|  |  | whitish yellow | |  | |  |  | Bravia | 1 |
|  |  | yellow | |  | |  |  |  | 2 |
|  |  | yellowish green | | vert | | grün | verde | Sweet banana | 3 |
|  |  | greenish white | | pourpre | | purpurn | púrpura |  | 4 |
|  |  | green | |  | |  |  | California wonder, Lamuyo | 5 |
|  |  | purple | |  | |  |  | Lilo | 6 |

|  |  | English | | français | | deutsch | español | Example Varieties Exemples Beispielssorten Variedades ejemplo | Note/ Nota |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **25.** |  | **QN** | **VG** |  | **(b)** |  | | | |
|  |  | |  | | --- | | **Only varieties with fruit color green or purple before maturity: Fruit: intensity of color before maturity** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | very light | |  | |  |  |  | 1 |
|  |  | light | |  | |  |  |  | 3 |
|  |  | medium | |  | |  |  |  | 5 |
|  |  | dark | |  | |  |  |  | 7 |
|  |  | very dark | |  | |  |  |  | 9 |
| **26.** |  | **QL** | **VG** | **(+)** | **(b)** |  | | | |
|  |  | |  | | --- | | **Varieties with fruit color purple before maturity excluded: Fruit: anthocyanin coloration before maturity** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | absent or weak | |  | |  |  | Lamuyo | 1 |
|  |  | medium | |  | |  |  |  | 2 |
|  |  | strong | |  | |  |  | Sweet banana | 3 |
| **27.** |  | **PQ** | **VG** |  | **(c)** |  | | | |
|  |  | |  | | --- | | **Fruit: attitude** | | | |  | | --- | | **Fruit: port** | | | |  | | --- | | **Frucht: Haltung** | | |  | | --- | | **Fruto: porte** | |  |  |
|  |  | erect | | dressé | | aufrecht | erecto | Pusztagold | 1 |
|  |  | horizontal | | horizontal | | waagerecht | horizontal | PAZ szentesi | 2 |
|  |  | drooping | | retombant | | hängend | colgante | De Cayenne, Lamuyo | 3 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **28.** | **(\*)** | **QN** | **MS/VG** |  | **(c)** |  | | | |
|  |  | |  | | --- | | **Fruit: length** | | | |  | | --- | | **Fruit: longueur** | | | |  | | --- | | **Frucht: Länge** | | |  | | --- | | **Fruto: longitud** | |  |  |
|  |  | very short | | très courte | | sehr kurz | muy corta | Cherry Bomb, PAZ szentesi | 1 |
|  |  | short | | courte | | kurz | corta | Ophelia, Smolder | 3 |
|  |  | medium | | moyenne | | mittel | media | California wonder | 5 |
|  |  | long | | longue | | lang | larga | Bravia, De Cayenne | 7 |
|  |  | very long | | très longue | | sehr lang | muy larga | Corno di toro rosso, Sweet banana | 9 |

|  |  | English | | français | | deutsch | español | Example Varieties Exemples Beispielssorten Variedades ejemplo | Note/ Nota |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **29.** | **(\*)** | **QN** | **MS/VG** | **(+)** | **(c)** |  | | | |
|  |  | |  | | --- | | **Fruit: diameter** | | | |  | | --- | | **Fruit: diamètre** | | | |  | | --- | | **Frucht: Durchmesser** | | |  | | --- | | **Fruto: diámetro** | |  |  |
|  |  | very narrow | | très étroit | | sehr schmal | muy estrecho | De Cayenne | 1 |
|  |  | narrow | | étroit | | schmal | estrecho | Cherry Bomb | 3 |
|  |  | medium | | moyen | | mittel | medio | Doux italien | 5 |
|  |  | broad | | large | | breit | ancho | Lamuyo, Maduro | 7 |
|  |  | very broad | | très large | | sehr breit | muy ancho | Floridor, Ibleor | 9 |
| **30.** | **(\*)** | **QN** | **MS/VG** | **(+)** | **(c)** |  | | | |
|  |  | |  | | --- | | **Fruit: ratio length/diameter** | | | |  | | --- | | **Fruit: rapport longueur/diamètre** | | | |  | | --- | | **Frucht: Verhältnis Länge/Durchmesser** | | |  | | --- | | **Fruto: relación entre la longitud y el diámetro** | |  |  |
|  |  | very small | | très faible | | sehr klein | muy pequeña | Liebesapfel, PAZ szentesi | 1 |
|  |  | small | | faible | | klein | pequeña | Bucano | 3 |
|  |  | medium | | moyen | | mittel | media | Acorde, Maduro | 5 |
|  |  | large | | élevé | | groß | grande | Lamuyo, Vidi | 7 |
|  |  | very large | | très élevé | | sehr groß | muy grande | De Cayenne, Spadi | 9 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **31.** | **(\*)** | **PQ** | **VG** | **(+)** | **(c)** |  | | | |
|  |  | |  | | --- | | **Fruit: shape in longitudinal section** | | | |  | | --- | | **Fruit: forme de la section longitudinale** | | | |  | | --- | | **Frucht: Form des Längsschnitts** | | |  | | --- | | **Fruto: forma en sección longitudinal** | |  |  |
|  |  | oblate | | aplatie | | breitrund | plana | Liebesapfel, PAZ szentesi | 1 |
|  |  | circular | | circulaire | | kreisförmig | circular | Cherry Bomb | 2 |
|  |  | cordate | | cordiforme | | herzförmig | acorazonada | Morrón de conserva 3 | 3 |
|  |  | square | | quadrangulaire | | quadratisch | cuadrada | Maranello, Yolo Wonder | 4 |
|  |  | rectangular | | rectangulaire | | rechteckig | rectangular | Raggio | 5 |
|  |  | trapezoidal | | trapézoïdale | | trapezförmig | trapezoidal | Altea | 6 |
|  |  | moderately triangular | | modérément triangulaire | | leicht dreieckig | moderadamente triangular | Bravia | 7 |
|  |  | narrowly triangular | | triangulaire étroite | | schmal dreieckig | triangular estrecha | De Cayenne | 8 |
| **32.** |  | **PQ** | **VG** | **(+)** | **(c)** |  | | | |
|  |  | |  | | --- | | **Fruit: curvature** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | straight | | droite | | gerade | recto | Kappy, Lamuyo | 1 |
|  |  | predominantly curved | |  | |  |  | Sweet banana | 2 |
|  |  | predominantly sinuate | |  | |  |  | Doux italien | 3 |

|  |  | English | | français | | deutsch | español | Example Varieties Exemples Beispielssorten Variedades ejemplo | Note/ Nota |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **33.** |  | **PQ** | **VG** |  | **(c)** |  | | | |
|  |  | |  | | --- | | **Fruit: shape in cross section (at the middle of the fruit)** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | elliptic | |  | |  |  | Sweet banana | 1 |
|  |  | angular | |  | |  |  | Solario | 2 |
|  |  | circular | |  | |  |  | Doux très long des Landes | 3 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **34.** |  | **QN** | **VG** | **(+)** | **(c)** |  | | | |
|  |  | |  | | --- | | **Fruit: sinuation of pericarp at basal part** | | | |  | | --- | | **Fruit: sinuosité du péricarpe sur la partie basale** | | | |  | | --- | | **Frucht: Wellung des Perikarps am basalen Teil** | | |  | | --- | | **Fruto: sinuosidad del pericarpio de la parte basal** | |  |  |
|  |  | absent or very weak | | absente ou très faible | | fehlend oder sehr gering | ausente o muy débil | Acorde, Smolder | 1 |
|  |  | weak | | faible | | gering | débil | Donat, Kappy | 3 |
|  |  | medium | | moyenne | | mittel | media | Banán | 5 |
|  |  | strong | | forte | | stark | fuerte | Hawker | 7 |
|  |  | very strong | | très forte | | sehr stark | muy fuerte | Doux italien, Gelber Spiral | 9 |
| **35.** |  | **QN** | **VG** | **(+)** | **(c)** |  | | | |
|  |  | |  | | --- | | **Fruit: sinuation of pericarp excluding basal part** | | | |  | | --- | | **Fruit: sinuosité du péricarpe hors base** | | | |  | | --- | | **Frucht: Wellung des Perikarps ohne basalen Teil** | | |  | | --- | | **Fruto: sinuosidad del pericarpio excluida la parte basal** | |  |  |
|  |  | absent or very weak | | absente ou très faible | | fehlend oder sehr gering | ausente o muy débil | Acorde, Yolo Wonder | 1 |
|  |  | weak | | faible | | gering | débil | Sonar | 3 |
|  |  | medium | | moyenne | | mittel | media | Rodri | 5 |
|  |  | strong | | forte | | stark | fuerte | De Cayenne, Doux italien | 7 |
|  |  | very strong | | très forte | | sehr stark | muy fuerte |  | 9 |
| **36.** |  | **PQ** | **VG** |  | **(c)** |  | | | |
|  |  | |  | | --- | | **Fruit: shape of apex** | | | |  | | --- | | **Fruit: forme du sommet** | | | |  | | --- | | **Frucht: Form der Spitze** | | |  | | --- | | **Fruto: forma del ápice** | |  |  |
|  |  | very acute | | très pointue | | sehr spitz | muy aguda | De Cayenne | 1 |
|  |  | moderately acute | | pointue | | spitz | aguda | Kappone | 2 |
|  |  | rounded | | arrondie | | abgerundet | redondeada | Red Tinkerbell | 3 |
|  |  | moderately depressed | | déprimée | | eingesenkt | hundida | Maduro | 4 |
|  |  | very depressed | | très déprimée | | stark eingesenkt | muy hundida | Monte | 5 |

|  |  | English | | français | | deutsch | español | Example Varieties Exemples Beispielssorten Variedades ejemplo | Note/ Nota |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **37.** |  | **QN** | **VG** | **(+)** | **(c)** |  | | | |
|  |  | |  | | --- | | **Fruit: texture of surface** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | smooth or very slightly wrinkled | |  | |  |  | Smolder | 1 |
|  |  | slightly wrinkled | |  | |  |  |  | 2 |
|  |  | strongly wrinkled | |  | |  |  |  | 3 |
| **38.** | **(\*)** | **PQ** | **VG** |  | **(c)** |  | | | |
|  |  | |  | | --- | | **Fruit: color at maturity** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | yellow | |  | |  |  | Allrounder | 1 |
|  |  | orange | |  | |  |  | Ariane | 2 |
|  |  | red | |  | |  |  | Lamuyo | 3 |
|  |  | brown | |  | |  |  |  | 4 |
|  |  | green | |  | |  |  | Sweet46 | 5 |
| **39.** |  | **QN** | **VG** |  | **(c)** |  | | | |
|  |  | |  | | --- | | **Fruit: intensity of color at maturity** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | light | |  | |  |  |  | 3 |
|  |  | medium | |  | |  |  |  | 5 |
|  |  | dark | |  | |  |  |  | 7 |
| **40.** |  | **QN** | **VG** |  | **(c)** |  | | | |
|  |  | |  | | --- | | **Fruit: glossiness** | | | |  | | --- | | **Fruit: brillance** | | | |  | | --- | | **Frucht: Glanz** | | |  | | --- | | **Fruto: brillo** | |  |  |
|  |  | very weak | | très faible | | sehr gering | muy débil |  | 1 |
|  |  | weak | | faible | | gering | débil | Macska sárga | 3 |
|  |  | medium | | moyenne | | mittel | medio | Sonar | 5 |
|  |  | strong | | forte | | stark | fuerte | Doux italien | 7 |
|  |  | very strong | | très forte | | sehr stark | muy fuerte | Ocelot | 9 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **41.** |  | **QN** | **VG** |  | **(c)** |  | | | |
|  |  | |  | | --- | | **Fruit: depth of stalk cavity** | | | |  | | --- | | **Fruit: profondeur de la dépression pédonculaire** | | | |  | | --- | | **Frucht: Tiefe der Stielhöhle** | | |  | | --- | | **Fruto: profundidad de la cavidad peduncular** | |  |  |
|  |  | absent or very shallow | |  | |  |  | Sweet banana | 1 |
|  |  | shallow | | peu profonde | | flach | poco profunda | Doux italien | 3 |
|  |  | medium | | moyenne | | mittel | media | Lamuyo, Maduro | 5 |
|  |  | deep | | profonde | | tief | profunda | Baquero | 7 |
|  |  | very deep | | très profonde | | sehr tief | muy profunda | Dumbo34 | 9 |

|  |  | English | | français | | deutsch | español | Example Varieties Exemples Beispielssorten Variedades ejemplo | Note/ Nota |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **42.** |  | **QN** | **VG** | **(+)** | **(c)** |  | | | |
|  |  | |  | | --- | | **Fruit: depth of interloculary grooves** | | | |  | | --- | | **Fruit: profondeur des dépressions interloculaires** | | | |  | | --- | | **Frucht: Tiefe der Furchen zwischen den Kammern** | | |  | | --- | | **Fruto: profundidad de los surcos interloculares** | |  |  |
|  |  | absent or very shallow | | nulles ou très peu profondes | | fehlend oder sehr flach | ausente o muy poco profunda | De Cayenne | 1 |
|  |  | shallow | | peu profondes | | flach | poco profunda | Kappone | 3 |
|  |  | medium | | moyennes | | mittel | media | Lamuyo, Marconi | 5 |
|  |  | deep | | profondes | | tief | profunda | Round of Hungary | 7 |
| **43.** | **(\*)** | **QN** | **MG** |  | **(c)** |  | | | |
|  |  | |  | | --- | | **Fruit: number of locules** | | | |  | | --- | | **Fruit: nombre de loges** | | | |  | | --- | | **Frucht: Anzahl Kammern** | | |  | | --- | | **Fruto: número de lóculos** | |  |  |
|  |  | predominantly two | | le plus souvent deux | | vorwiegend zwei | predominante dos | De Cayenne | 1 |
|  |  | equally two and three | | également deux et trois | | gleichermaßen zwei und drei | igualmente dos y tres | Banán | 2 |
|  |  | predominantly three | | le plus souvent trois | | vorwiegend drei | predominante tres | Century | 3 |
|  |  | equally three and four | | également trois et quatre | | gleichermaßen drei und vier | igualmente tres y cuatro | Lamuyo, Sonar | 4 |
|  |  | predominantly four | |  | |  |  | PAZ szentesi | 5 |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **44.** | **(\*)** | **QN** | **VG** |  | **(c)** |  | | | |
|  |  | |  | | --- | | **Fruit: thickness of flesh** | | | |  | | --- | | **Fruit: épaisseur de la chair** | | | |  | | --- | | **Frucht: Dicke des Fleisches** | | |  | | --- | | **Fruto: espesor de la pulpa** | |  |  |
|  |  | very thin | | très mince | | sehr dünn | muy delgado | De Cayenne, Macska sárga | 1 |
|  |  | thin | | mince | | dünn | delgado | Banán, Doux très long des Landes | 3 |
|  |  | medium | | moyenne | | mittel | medio | Lamuyo | 5 |
|  |  | thick | | épaisse | | dick | grueso | Deimos | 7 |
|  |  | very thick | | très épaisse | | sehr dick | muy grueso | Solario | 9 |
| **45.** | **(\*)** | **QL** | **VG** | **(+)** | **(c)** |  | | | |
|  |  | |  | | --- | | **Fruit: capsaicin in placenta** | | | |  | | --- | | **Fruit: capsaicine dans le placenta** | | | |  | | --- | | **Frucht: Capsaicin in der Plazenta** | | |  | | --- | | **Fruto: capsaicina en la placenta** | |  |  |
|  |  | absent | | absent | | fehlend | ausente | Sonar, Sweet banana | 1 |
|  |  | present | | présent | | vorhanden | presente | De Cayenne | 9 |
| **46.** |  | **QL** | **VS** |  | **(c)** |  | | | |
|  |  | |  | | --- | | **Fruit: seeds** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | absent | |  | |  |  | SLP2B131 | 1 |
|  |  | present | |  | |  |  | Lamuyo | 9 |

|  |  | English | | français | | deutsch | español | Example Varieties Exemples Beispielssorten Variedades ejemplo | Note/ Nota |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **47.** |  | **QN** | **MS/VG** |  | **(c)** |  | | | |
|  |  | |  | | --- | | **Stalk: length** | | | |  | | --- | | **Pédoncule: longueur** | | | |  | | --- | | **Fruchtstiel: Länge** | | |  | | --- | | **Pedúnculo: longitud** | |  |  |
|  |  | very short | | très courte | | sehr kurz | muy corta | Jablina | 1 |
|  |  | short | | courte | | kurz | corta | Corvinus, Yolo Wonder | 3 |
|  |  | medium | | moyenne | | mittel | media | Sonar | 5 |
|  |  | long | | longue | | lang | larga | De Cayenne | 7 |
|  |  | very long | | très longue | | sehr lang | muy larga | Farnese, Lipari | 9 |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **48.** |  | **QN** | **MS/VG** | **(+)** | **(c)** |  | | | |
|  |  | |  | | --- | | **Stalk: thickness** | | | |  | | --- | | **Pédoncule: grosseur** | | | |  | | --- | | **Fruchtstiel: Dicke** | | |  | | --- | | **Pedúnculo: espesor** | |  |  |
|  |  | very thin | | très mince | | sehr dünn | muy delgado | De Cayenne, Doux très long des Landes, Macska sárga | 1 |
|  |  | thin | | mince | | dünn | delgado | Sweet banana | 3 |
|  |  | medium | | moyenne | | mittel | medio | Doux italien | 5 |
|  |  | thick | | épaisse | | dick | grueso | Lamuyo | 7 |
|  |  | very thick | | très épaisse | | sehr dick | muy grueso |  | 9 |
| **49.** |  | **QL** | **VG** | **(+)** | **(c)** |  | | | |
|  |  | |  | | --- | | **Calyx: aspect** | | | |  | | --- | | **Calice: aspect** | | | |  | | --- | | **Kelch: Aussehen** | | |  | | --- | | **Cáliz: aspecto** | |  |  |
|  |  | non enveloping | | non enrobant | | nicht umhüllend | no envolvente | Lamuyo, Sonar | 1 |
|  |  | enveloping | | enrobant | | umhüllend | envolvente | De Cayenne, Sweet banana | 2 |
| **50.** |  | **QN** | **VG** | **(+)** |  |  | | | |
|  |  | |  | | --- | | **Time of maturity** | | | |  | | --- | | **Époque de maturité** | | | |  | | --- | | **Zeitpunkt der Reife** | | |  | | --- | | **Época de madurez** | |  |  |
|  |  | very early | | très précoce | | sehr früh | muy temprana | Macska sárga, Madison | 1 |
|  |  | early | | précoce | | früh | temprana | Kosmik | 3 |
|  |  | medium | | moyenne | | mittel | media | Lamuyo, Sonar | 5 |
|  |  | late | | tardive | | spät | tardía | Doux d’Espagne | 7 |
|  |  | very late | | très tardive | | sehr spät | muy tardía | Teseo | 9 |
| **51.** | **(\*)** | **QL** | **VG** | **(+)** |  |  | | | |
|  |  | |  | | --- | | **Resistance to Tobamovirus - *Tobacco mosaic virus* - Pathotype 0 (TMV: 0)** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | absent | |  | |  |  | Lamu, Pepita, Piquillo | 1 |
|  |  | present | |  | |  |  | Fehérözön, Turia, Yolo Wonder | 9 |

|  |  | English | | français | | deutsch | español | Example Varieties Exemples Beispielssorten Variedades ejemplo | Note/ Nota |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **52.** | **(\*)** | **QL** | **VG** | **(+)** |  |  | | | |
|  |  | |  | | --- | | **Resistance to Tobamovirus - *Pepper mild mottle virus* - Pathotype 1.2 (PMMoV: 1.2)** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | absent | |  | |  |  | Fehérözön, Lamu, Turia, Yolo Wonder | 1 |
|  |  | present | |  | |  |  | Candela, Ferrari | 9 |
| **53.** | **(\*)** | **QL** | **VG** | **(+)** |  |  | | | |
|  |  | |  | | --- | | **Resistance to Tobamovirus - *Pepper mild mottle virus* - Pathotype 1.2.3 (PMMoV: 1.2.3)** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | absent | |  | |  |  | Solario, Yolo Wonder | 1 |
|  |  | present | |  | |  |  | Allrounder | 9 |
| **54.** | **(\*)** | **QL** | **VG** | **(+)** |  |  | | | |
|  |  | |  | | --- | | **Resistance to *Potato Y virus* (PVY) - Pathotype 0 (PVY: 0)** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | absent | |  | |  |  | Ferrari, Piquillo, Yolo Wonder | 1 |
|  |  | present | |  | |  |  | Florida VR2 | 9 |
| **55.** |  | **QL** | **VG** | **(+)** |  |  | | | |
|  |  | |  | | --- | | **Resistance to *Potato Y virus* (PVY) - Pathotype 1 (PVY: 1)** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | absent | |  | |  |  | Yolo Wonder, Yolo Y | 1 |
|  |  | present | |  | |  |  | Florida VR2 | 9 |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **56.** |  | **QL** | **VG** | **(+)** |  |  | | | |
|  |  | |  | | --- | | **Resistance to *Potato Y virus* (PVY) - Pathotype 1.2 (PVY: 1.2)** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | absent | |  | |  |  | Florida VR2, Yolo Wonder, Yolo Y | 1 |
|  |  | present | |  | |  |  | Serrano Criollo de Morenos | 9 |
| **57.** |  | **QL** | **VG** | **(+)** |  |  | | | |
|  |  | |  | | --- | | **Resistance to *Phytophthora capsici* (Pc)** | | | |  | | --- | | **Résistance à *Phytophthora capsici* (Pc)** | | | |  | | --- | | **Resistenz gegen *Phytophthora capsici* (Pc)** | | |  | | --- | | **Resistencia al *Phytophthora capsici* (Pc)** | |  |  |
|  |  | absent | | absente | | fehlend | ausente | Jupiter, Yolo Wonder | 1 |
|  |  | present | | présente | | vorhanden | presente | Favolor, Solario | 9 |
|  |  | English | | français | | deutsch | español | Example Varieties Exemples Beispielssorten Variedades ejemplo | Note/ Nota |
| **58.** |  | **QL** | **VG** | **(+)** |  |  | | | |
|  |  | |  | | --- | | **Resistance to *Cucumber mosaic virus*(CMV)** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | absent | |  | |  |  | Yolo Wonder | 1 |
|  |  | present | |  | |  |  | Favolor, Solario | 9 |
| **59.** | **(\*)** | **QL** | **VG** | **(+)** |  |  | | | |
|  |  | |  | | --- | | **Resistance to *Tomato spotted wilt virus* Pathotype 0 (TSWV: 0)** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | absent | |  | |  |  | Lamuyo, Yolo Wonder | 1 |
|  |  | present | |  | |  |  | Galileo | 9 |
| **60.** |  | **QL** | **VG** | **(+)** |  |  | | | |
|  |  | |  | | --- | | **Resistance to *Xanthomonas campestris* pv. *vesicatoria* (Xcv) - Pathotype 1** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | absent | |  | |  |  | Yolo Wonder | 1 |
|  |  | present | |  | |  |  | Filidor, San Marco | 9 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **61.** |  | **QL** | **VG** | **(+)** |  |  | | | |
|  |  | |  | | --- | | **Resistance to *Xanthomonas campestris* pv. *vesicatoria* (Xcv) - Pathotype 2** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | absent | |  | |  |  | Yolo Wonder | 1 |
|  |  | present | |  | |  |  | Filidor, San Marco | 9 |
| **62.** |  | **QL** | **VG** | **(+)** |  |  | | | |
|  |  | |  | | --- | | **Resistance to *Xanthomonas campest*ris pv. *vesicatoria* (Xcv) - Pathotype 3** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | absent | |  | |  |  | Yolo Wonder | 1 |
|  |  | present | |  | |  |  | Filidor, San Marco | 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 plant, stem and leaves to be made at the time of the first color change of the fruit. Secondly observations on stem and leaves should be made at the middle third of the plant. | | | | | |  | | --- | | (b) | | |  | | --- | | Observations should be made before the first color change of the fruit. | | | | | |  | | --- | | (c) | | |  | | --- | | Observations should be made at maturity, after the time of the color change. | | | | |
| |  | | --- | |  | |

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| |  |  |  | | --- | --- | --- | | |  | | --- | | *8.2* | | *Explanations for individual characteristics* | |  | | | |  | | --- | | Ad. 1: Plant: habit  Observations only to be made on when plants have their natural habit without being pruned, guided or staked. | | | | |  | | --- | | Ad. 2: Plant: height  To be observed after a fruit set on several nodes.  Poor fruit set may influence the vigor and thus the height of the plant. | | | | |  | | --- | | Ad. 3: Plant: length of stem  Observations should be made from the cotyledons to the node of the first flower branch.  wordml://76.png | | | |

|  |  |  |  |  |  |  |  |  |  |
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| |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | Ad. 4: Plant: shortened internodes (in upper part)     |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | Observations should be made on plants which have not been pruned.  The shoot system of pepper consists of main stems developing from the main axis, and side shoots which develop from the nodes on the main axis and on the main stems.    Absent:  the main stems grow indeterminately;  one or two flowers develop per node and shortened internodes never develop.    Present:  after the first branching of the main axis, shorter internodes appear and the growth of the main stem ends in a bunch of flowers (it appears as if there are more than two flowers per node).   |  |  | | --- | --- | | wordml://77.png | wordml://78.png | | 1 | 9 | | absent | present | | | | |

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| |  |  | | --- | --- | | |  | | --- | | Ad. 5: Varieties with shortened internodes only: Plant: number of internodes between the first flower and shortened internodes  See Ad. 4 | | | |  | | --- | | Ad. 6: Varieties without shortened internodes only: Plant: length of internode (on primary side shoots)  See Ad. 4 | | | |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Ad. 11: Leaf: shape   |  |  |  | | --- | --- | --- | | wordml://79.png | wordml://80.png | wordml://81.png | | 1 | 2 | 3 | | lanceolate | ovate | broad elliptic | | | |

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| --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  | | --- | --- | | |  | | --- | | Ad. 14: Leaf: intensity of anthocyanin coloration of upper side  Observations should be made on fresh leaves. | | | |  |  |  |  | | --- | --- | --- | --- | | Ad. 15: Leaf blade: variegation   |  | | --- | | wordml://86.png | | 9 | | present | | | |

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| |  |  | | --- | --- | | |  | | --- | | Ad. 42: Fruit: depth of interloculary grooves  Observations should be made in the middle part of the fruit. | | | |  | | --- | | Ad. 45: Fruit: capsaicin in placenta  The presence of capsaicin is observed by tasting the pepper flesh together with the locules, in the placenta area. | | | |  | | --- | | Ad. 48: Stalk: thickness  Observations should be made at the middle of the stalk. | | | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | Ad. 49: Calyx: aspect   |  |  | | --- | --- | | wordml://151.png | wordml://152.png | | 1 | 2 | | non enveloping | enveloping |   Observations should be made whether or not the calyx is enveloping the fruit including its shoulder. | | | |  | | --- | | Ad. 50: Time of maturity  Maturity is reached at the first color change of the fruit. | | |

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L2 is not used in breeding   |  |  |  | | --- | --- | --- | | 7. | Establishment pathogenicity | use susceptible pepper standard or lesions on *Nicotiana tabacum* 'Xanthi' 2 days after inoculation | | 8. | Multiplication inoculum |  | | 8.1 | Multiplication medium | on living plant or desiccated leaves | | 8.2 | Multiplication variety | tomato or pepper (e.g. Lamu) or *Nicotiana tabacum* (cv. Samsun) | | 8.3 | Plant stage at inoculation | cotyledons fully developed or at “first leaf” pointed stage or 3-5 leaf | | 8.4 | Inoculation medium | ice-cold PBS + carborundum | | 8.5 | Inoculation method | rubbing | | 8.6 | Harvest of inoculum | - | | 8.7 | Check of harvested inoculum | - | | 8.8 | Shelflife/viability inoculum | freeze-dried leaves dry storage at 4°C for ten years | | 9. | Format of the test |  | | 9.1 | Number of plants per genotype | at least 20 plants | | 9.2 | Number of replicates | e.g. 1 | | 9.3 | Control varieties | see table of example varieties below |      |  |  |  |  | | --- | --- | --- | --- | | Resistance to | ToMV: 0 – TMV: 0 | PMMoV: 1.2 | PMMoV: 1.2.3 | | absent | Gordo | Lamuyo, Yolo Wonder | Solario, Yolo Wonder | | present | Lamuyo, Sonar, Yolo Wonder | Ferrari, Solario | Allrounder |      |  |  |  | | --- | --- | --- | | 9.4 | Test design | to add untreated plant | | 9.5 | Test facility | glasshouse or climatic chamber | | 9.6 | Temperature | 20-25°C | | 9.7 | Light | at least 12h | | 9.8 | Season | - | | 9.9 | Special measures | - | | 10. | Inoculation |  | | 10.1 | Preparation inoculum | juice: PBS(1:9). To obtain the juice, it is preferable to use a mortar for grinding infected leaves | | 10.2 | Quantification inoculum | 150 plants with 100 ml virus suspension | | 10.3 | Plant stage at inoculation | cotyledons fully developed or at “first leaf” pointed stage or 3-5th leaf | | 10.4 | Inoculation method | rubbing with a virus suspension or using of brush for more equable inoculation and avoiding mechanical damage | | 10.5 | First observation | 5-6 days to 10 - 15 days post inoculation | | 10.6 | Second observation | 10-11 days post inoculation to 15 - 20 days post inoculation | | 10.7 | Final observations | 20 days post inoculation | | 11. | Observations |  | | 11.1 | Method | visual, comparative; necrosis signifies hypersensitivity and resistance | | 11.2 | Observation scale |  | |  | [1] absent: | mosaic (sometimes developing late, sometimes early and leading to plant death without hypersensitivity) | |  | [9] present | All these observations could be made:   * systemic necrosis, stunting * local necrosis, leaf dropping * no virus symptoms, only mechanical damage   They can be linked to several factors such as the earliness of contamination, the strain use for example (see CPVO project HARMORES 2 – 2012-2015), but not due to particular genotypes. | | 11.3 | Validation of test | on standards | | 11.4 | Off-types | maximum 1 on 20 plants | | 12. | Interpretation of data in terms of UPOV characteristic states | QL | | 13. | Critical control points | Tobamovirus pathotype is defined on differentials and may belong to TMV: 0, PMMoV: 1.2, PMMoV: 1.2.3 | | | |

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| |  |  | | --- | --- | | |  | | --- | | Ad. 52: Resistance to Tobamovirus - *Pepper mild mottle virus* - Pathotype 1.2 (PMMoV: 1.2)  See Ad. 47 | | | |  | | --- | | Ad. 53: Resistance to Tobamovirus - *Pepper mild mottle virus* - Pathotype 1.2.3 (PMMoV: 1.2.3)  See Ad. 47 | | |

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R = resistant) |      |  |  |  |  | | --- | --- | --- | --- | |  | PVY pathotypes | | | | Pepper variety | 0 | 1 | 1.2 | | Yolo Wonder Yolo Y Florida VR2 Serrano Criollo de Morelos 334, Solario, W4 | S R R R | S S R R | S S S \* R |                   \* Florida VR2 may show vague and very late symptoms with pathotype 1.2   |  |  |  | | --- | --- | --- | | 7. | Establishment pathogenicity | on susceptible plant (e.g. on *Nicotiana tabacum* 'Xanthi' and *N. glutinosa)* | | 8. | Multiplication inoculum |  | | 8.1 | Multiplication medium | living plant | | 8.2 | Multiplication variety | on susceptible variety (e.g. *N. tabacum* 'Xanthi') | | 8.3 | Plant stage at inoculation | 3 leaf stage | | 8.4 | Inoculation medium | ice-cold buffer solution 0.03 M PBS + Carborundum + 0.2% DIECA | | 8.5 | Inoculation method | rubbing | | 8.6 | Harvest of inoculum | - | | 8.7 | Check of harvested inoculum | - | | 8.8 | Shelflife/viability inoculum | freeze-dried leaves dry storage at 4°C for ten years | | 9. | Format of the test |  | | 9.1 | Number of plants per genotype | at least 20 plants | | 9.2 | Number of replicates | e.g. 1 | | 9.3 | Control varieties | - |      |  |  |  |  | | --- | --- | --- | --- | | Resistance | PVY: 0 | PVY: 1 | PVY: 1.2 | | absent | Yolo Wonder | Yolo Wonder | Yolo Wonder | | present | Balico, Gerico, Solario | Solario, Vidi | Fenice, Solario |      |  |  |  | | --- | --- | --- | | 9.4 | Test design | to add untreated plant | | 9.5 | Test facility | glasshouse or climatic chamber | | 9.6 | Temperature | 22°C constant | | 9.7 | Light | at least 12h | | 9.8 | Season | - | | 9.9 | Special measures | - | | 10. | Inoculation |  | | 10.1 | Preparation inoculum | leaf in PBS - grinding with mortar | | 10.2 | Quantification inoculum | - | | 10.3 | Plant stage at inoculation | cotyledons fully developed or at “first leaf” stage or 3 leaf stage | | 10.4 | Inoculation method | rubbing with a virus solution | | 10.5 | First observation | 6 - 14 days post inoculation | | 10.6 | Second observation | 14 - 21 days post inoculation | | 10.7 | Final observations | 21 days post inoculation | | 11. | Observations |  | | 11.1 | Method | visual, comparative | | 11.2 | Observation scale |  | |  | [1] absent | growth retardation, leaf malformation, light mosaic in youngest leaves, or red veins; stem necrosis, plant death | |  | [9] present | no symptoms. | | 11.3 | Validation of test | on standards | | 11.4 | Off-types | maximum 1 on 20 plants | | 12. | Interpretation of data in terms of UPOV characteristic states | QL | | 13. | Critical control points | remark:  avoid high temperatures (>30°C) | | | |

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| |  |  | | --- | --- | | |  | | --- | | Ad. 55: Resistance to *Potato Y virus* (PVY) - Pathotype 1 (PVY: 1)  See Ad. 50 | | | |  | | --- | | Ad. 56: Resistance to *Potato Y virus* (PVY) - Pathotype 1.2 (PVY: 1.2)  See Ad. 50 | | |

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[1] susceptible: Jupiter, Yolo Wonder [9] moderately resistant: Favolor [9] resistant: Solario | | 13. | Critical control points | absence of differential interactions between host and pathogen | | | |

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| | 7. | Establishment pathogenicity | on susceptible plant or *Nicotiana benthamiana, N. rustica* | | 8. | Multiplication inoculum |  | | 8.1 | Multiplication medium | living plant | | 8.2 | Multiplication variety | Yolo Wonder or *N. benthamiana*, *N. rustica* | | 8.3 | Plant stage at inoculation | cotyledons fully developed or at “first leaf” pointed stage or 1- 3 leaves | | 8.4 | Inoculation medium | ice-cold buffer suspension or 0.03 M PBS + optional addition of 0.1% sodium sulfite freshly added | | 8.5 | Inoculation method | rubbing with carborundum | | 8.6 | Harvest of inoculum | - | | 8.7 | Check of harvested inoculum | - | | 8.8 | Shelflife/viability inoculum | stability in ice cold suspension ca. 15-20 minutes | | 9. | Format of the test |  | | 9.1 | Number of plants per genotype | at least 20 | | 9.2 | Number of replicates | e.g. 1 | | 9.3 | Control varieties | Lamuyo, Yolo Wonder (susceptible), Galileo, Jackal, Jackpot, Prior (resistant) | | 9.4 | Test design | - | | 9.5 | Test facility | growth chamber or insect proof glasshouse | | 9.6 | Temperature | 18-20°C or 20-22°C | | 9.7 | Light | 12 h | | 9.8 | Season | all seasons, but winter reduce the risk of thrips infestation | | 9.9 | Special measures | biohazard sign on compartment for countries with a TSWV quarantine status | | 10. | Inoculation |  | | 10.1 | Preparation inoculum | - | | 10.2 | Quantification inoculum | - | | 10.3 | Plant stage at inoculation | cotyledons fully developed / at “first leaf” pointed stage or 1-3 leaves | | 10.4 | Inoculation method | rubbing with carborundum, then apply shading or darkness for 24h option:  repeat the inoculation 2-3 days later to reduce accidental escapes | | 10.5 | First observation | 5-6 days to10 - 15 days post inoculation | | 10.6 | Second observation | 10-11 days post inoculation to 15 - 21 days post inoculation | | 10.7 | Final observations | 21 days post inoculation | | 11. | Observations |  | | 11.1 | Method | visual, comparative | | 11.2 | Observation scale |  | |  | [1] absent | mosaic on young leaf, some leaf malformation | |  | [9] present | necrosis or only mechanical damage | | 11.3 | Validation of test | on standards | | 11.4 | Off-types | maximum 1 on 20 plants | | 12. | Interpretation of data in terms of UPOV characteristic states | QL | | 13. | Critical control points | Monitor and control the presence of thrips. TSWV is transmitted by thrips (*Thrips tabaci* and *Frankliniella occidentalis*.). TSWV has a broad host range. After a few multiplication the virus could be ineffective. New isolates can be obtained from practice by harvesting fruits of L4 pepper varieties infected naturally with TSWV. The fruits are kept at -70°C temperature. The presence of other viruses must be checked before using this material. | | | |

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to be taken from any source of infection in the field | | 5. | Isolate | expected reactions on resistant standard varieties | | 6. | Establishment isolate identity | on differentials |      |  |  |  |  | | --- | --- | --- | --- | | Differential | Pathotype 1 | Pathotype 2 | Pathotype 3 | | Early California Wonder | S | S | S | | Early California Wonder-10R (gene Bs1) | S | R | S | | Early California Wonder-20R (gene Bs2) | R | R | R | | Early California Wonder-30R (gene Bs3) | R | S | S | | PI 235047 (gene Bs4) | R | S | R |      |  |  |  | | --- | --- | --- | | 7. | Establishment pathogenicity | - | | 8. | Multiplication inoculum |  | | 8.1 | Multiplication medium | a bacterial growth medium, e.g. LPGA | | 8.2 | Multiplication variety | - | | 8.3 | Plant stage at inoculation | - | | 8.4 | Inoculation medium | - | | 8.5 | Inoculation method | - | | 8.6 | Harvest of inoculum | 48h culture | | 8.7 | Check of harvested inoculum | - | | 8.8 | Shelflife/viability inoculum | - | | 9. | Format of the test |  | | 9.1 | Number of plants per genotype | at least 20 | | 9.2 | Number of replicates | e.g. 1 | | 9.3 | Control varieties | Fehérözön, Yolo Wonder (susceptible), Emiro, Filidor, Gotico, San Marco, Solanor (resistant) | | 9.4 | Test design | - | | 9.5 | Test facility | - | | 9.6 | Temperature | 20-26°C day/night | | 9.7 | Light | 30.000 lux suggested, 16h/day | | 9.8 | Season | - | | 9.9 | Special measures | 80% RH | | 10. | Inoculation |  | | 10.1 | Preparation inoculum | harvest cells from LPGA plate after 48 h growing | | 10.2 | Quantification inoculum | 107 -108 cells per ml (Stronger reaction with the higher concentration.) | | 10.3 | Plant stage at inoculation | 6-8 true leaves | | 10.4 | Inoculation method | infiltration into abaxial surface of the interveinal region on either side of the midrib of a fully expanded leaf in 13-20mm diameter spots | | 10.5 | First observation | 2-5 days post inoculation | | 10.6 | Second observation | 6-8 days post inoculation | | 10.7 | Final observations | 10-14 days post inoculation | | 11. | Observations |  | | 11.1 | Method | visual, comparative | | 11.2 | Observation scale |  | |  | [1] absent | water soaking near infiltration site | |  | [9] present | necrotic reaction at infiltration site | | 11.3 | Validation of test | on standards | | 11.4 | Off-types | maximum 1 on 20 plants | | 12. | Interpretation of data in terms of UPOV characteristic states | QL | | 13. | Critical control points | - | | | |

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| |  |  | | --- | --- | | |  | | --- | | Ad. 61: Resistance to *Xanthomonas campestris* pv. *vesicatoria* (Xcv) - Pathotype 2  See Ad. 66 | | | |  | | --- | | Ad. 62: Resistance to *Xanthomonas campest*ris pv. *vesicatoria* (Xcv) - Pathotype 3  See Ad. 66 | | |
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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 | |  | | --- | | *Capsicum annuum* L. | | |  | | --- | |  | | |  |  |  |  |  | |  | |  | | --- | | 1.2 | | Common name | |  | | --- | | Sweet Pepper, Hot Pepper, Paprika, Chili | |  | |  |  |  | |  | | --- | |  | |  | |  |  |  |  |  | |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  |  |  |  | | 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 | |  |  | |  |  |  |  |  | |

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

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| |  |  |  | | --- | --- | --- | |  |  |  | |  | 4.2 | Method of propagating the variety | |  | |  |  |  | | --- | --- | --- | | |  | | --- | | 4.2.1 | | 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** |  |  | | --- | | **(4)** | | |  | | --- | | **Plant: shortened internodes (in upper part)** | |  |  |
|  | |  | | --- | | absent | | |  | | --- | | California wonder, De Cayenne | | |  | | --- | | 1 [   ] | |
|  | |  | | --- | | present | | |  | | --- | | Bucano | | |  | | --- | | 9 [   ] | |
|  |  |  |  |
|  |  |  |  |
| |  | | --- | | **5.2** |  |  | | --- | | **(19)** | | |  | | --- | | **Peduncle: attitude** | |  |  |
|  | |  | | --- | | predominantly erect | | |  | | --- | | Floridor | | |  | | --- | | 1 [   ] | |
|  | |  | | --- | | predominantly semi-drooping | | |  | | --- | | Bravia | | |  | | --- | | 2 [   ] | |
|  | |  | | --- | | predominantly drooping | | |  | | --- | | Brutus, Lamuyo | | |  | | --- | | 3 [   ] | |
|  |  |  |  |
|  |  |  |  |
| |  | | --- | | **5.3** |  |  | | --- | | **(22)** | | |  | | --- | | **Flower: anthocyanin coloration in anther** | |  |  |
|  | |  | | --- | | absent | | |  | | --- | | Bravia | | |  | | --- | | 1 [   ] | |
|  | |  | | --- | | present | | |  | | --- | | Brutus, Lamuyo | | |  | | --- | | 9 [   ] | |
|  |  |  |  |
|  |  |  |  |
| |  | | --- | | **5.4** |  |  | | --- | | **(23)** | | |  | | --- | | **Male sterility** | |  |  |
|  | |  | | --- | | absent | | |  | | --- | |  | | |  | | --- | | 1 [   ] | |
|  | |  | | --- | | partially | | |  | | --- | |  | | |  | | --- | | 2 [   ] | |
|  | |  | | --- | | present | | |  | | --- | |  | | |  | | --- | | 3 [   ] | |
|  |  |  |  |
|  |  |  |  |
| |  | | --- | | **5.5** |  |  | | --- | | **(24)** | | |  | | --- | | **Fruit: color (before maturity)** | |  |  |
|  | |  | | --- | | whitish yellow | | |  | | --- | | Bravia | | |  | | --- | | 1 [   ] | |
|  | |  | | --- | | yellow | | |  | | --- | |  | | |  | | --- | | 2 [   ] | |
|  | |  | | --- | | yellowish green | | |  | | --- | | Sweet banana | | |  | | --- | | 3 [   ] | |
|  | |  | | --- | | greenish white | | |  | | --- | |  | | |  | | --- | | 4 [   ] | |
|  | |  | | --- | | green | | |  | | --- | | California wonder, Lamuyo | | |  | | --- | | 5 [   ] | |
|  | |  | | --- | | purple | | |  | | --- | | Lilo | | |  | | --- | | 6 [   ] | |
|  |  |  |  |

|  | Characteristics | Example Varieties | Note |
| --- | --- | --- | --- |
|  |  |  |  |
| |  | | --- | | **5.6** |  |  | | --- | | **(25)** | | |  | | --- | | **Only varieties with fruit color green or purple before maturity : Fruit: intensity of color before maturity** | |  |  |
|  | |  | | --- | | very light | | |  | | --- | |  | | |  | | --- | | 1 [   ] | |
|  | |  | | --- | | very light to light | | |  | | --- | |  | | |  | | --- | | 2 [   ] | |
|  | |  | | --- | | light | | |  | | --- | |  | | |  | | --- | | 3 [   ] | |
|  | |  | | --- | | light to medium | | |  | | --- | |  | | |  | | --- | | 4 [   ] | |
|  | |  | | --- | | medium | | |  | | --- | |  | | |  | | --- | | 5 [   ] | |
|  | |  | | --- | | medium to dark | | |  | | --- | |  | | |  | | --- | | 6 [   ] | |
|  | |  | | --- | | dark | | |  | | --- | |  | | |  | | --- | | 7 [   ] | |
|  | |  | | --- | | dark to very dark | | |  | | --- | |  | | |  | | --- | | 8 [   ] | |
|  | |  | | --- | | very dark | | |  | | --- | |  | | |  | | --- | | 9 [   ] | |
|  |  |  |  |
|  |  |  |  |
| |  | | --- | | **5.7** |  |  | | --- | | **(28)** | | |  | | --- | | **Fruit: length** | |  |  |
|  | |  | | --- | | very short | | |  | | --- | | Cherry Bomb, PAZ szentesi | | |  | | --- | | 1 [   ] | |
|  | |  | | --- | | short | | |  | | --- | | Ophelia, Smolder | | |  | | --- | | 3 [   ] | |
|  | |  | | --- | | medium | | |  | | --- | | California wonder | | |  | | --- | | 5 [   ] | |
|  | |  | | --- | | long | | |  | | --- | | Bravia, De Cayenne | | |  | | --- | | 7 [   ] | |
|  | |  | | --- | | very long | | |  | | --- | | Corno di toro rosso, Sweet banana | | |  | | --- | | 9 [   ] | |
|  |  |  |  |
|  |  |  |  |
| |  | | --- | | **5.8** |  |  | | --- | | **(29)** | | |  | | --- | | **Fruit: diameter** | |  |  |
|  | |  | | --- | | very narrow | | |  | | --- | | De Cayenne | | |  | | --- | | 1 [   ] | |
|  | |  | | --- | | narrow | | |  | | --- | | Cherry Bomb | | |  | | --- | | 3 [   ] | |
|  | |  | | --- | | medium | | |  | | --- | | Doux italien | | |  | | --- | | 5 [   ] | |
|  | |  | | --- | | broad | | |  | | --- | | Lamuyo, Maduro | | |  | | --- | | 7 [   ] | |
|  | |  | | --- | | very broad | | |  | | --- | | Floridor, Ibleor | | |  | | --- | | 9 [   ] | |
|  |  |  |  |
|  |  |  |  |
| |  | | --- | | **5.9** |  |  | | --- | | **(31)** | | |  | | --- | | **Fruit: shape in longitudinal section** | |  |  |
|  | |  | | --- | | oblate | | |  | | --- | | Liebesapfel, PAZ szentesi | | |  | | --- | | 1 [   ] | |
|  | |  | | --- | | circular | | |  | | --- | | Cherry Bomb | | |  | | --- | | 2 [   ] | |
|  | |  | | --- | | cordate | | |  | | --- | | Morrón de conserva 3 | | |  | | --- | | 3 [   ] | |
|  | |  | | --- | | square | | |  | | --- | | Maranello, Yolo Wonder | | |  | | --- | | 4 [   ] | |
|  | |  | | --- | | rectangular | | |  | | --- | | Raggio | | |  | | --- | | 5 [   ] | |
|  | |  | | --- | | trapezoidal | | |  | | --- | | Altea | | |  | | --- | | 6 [   ] | |
|  | |  | | --- | | moderately triangular | | |  | | --- | | Bravia | | |  | | --- | | 7 [   ] | |
|  | |  | | --- | | narrowly triangular | | |  | | --- | | De Cayenne | | |  | | --- | | 8 [   ] | |
|  |  |  |  |

|  | Characteristics | Example Varieties | Note |
| --- | --- | --- | --- |
|  |  |  |  |
| |  | | --- | | **5.10** |  |  | | --- | | **(35)** | | |  | | --- | | **Fruit: sinuation of pericarp excluding basal part** | |  |  |
|  | |  | | --- | | absent or very weak | | |  | | --- | | Acorde, Yolo Wonder | | |  | | --- | | 1 [   ] | |
|  | |  | | --- | | very weak to weak | | |  | | --- | |  | | |  | | --- | | 2 [   ] | |
|  | |  | | --- | | weak | | |  | | --- | | Sonar | | |  | | --- | | 3 [   ] | |
|  | |  | | --- | | weak to medium | | |  | | --- | |  | | |  | | --- | | 4 [   ] | |
|  | |  | | --- | | medium | | |  | | --- | | Rodri | | |  | | --- | | 5 [   ] | |
|  | |  | | --- | | medium to strong | | |  | | --- | |  | | |  | | --- | | 6 [   ] | |
|  | |  | | --- | | strong | | |  | | --- | | De Cayenne, Doux italien | | |  | | --- | | 7 [   ] | |
|  | |  | | --- | | strong to very strong | | |  | | --- | |  | | |  | | --- | | 8 [   ] | |
|  | |  | | --- | | very strong | | |  | | --- | |  | | |  | | --- | | 9 [   ] | |
|  |  |  |  |
|  |  |  |  |
| |  | | --- | | **5.11** |  |  | | --- | | **(38)** | | |  | | --- | | **Fruit: color at maturity** | |  |  |
|  | |  | | --- | | yellow | | |  | | --- | | Allrounder | | |  | | --- | | 1 [   ] | |
|  | |  | | --- | | orange | | |  | | --- | | Ariane | | |  | | --- | | 2 [   ] | |
|  | |  | | --- | | red | | |  | | --- | | Lamuyo | | |  | | --- | | 3 [   ] | |
|  | |  | | --- | | brown | | |  | | --- | |  | | |  | | --- | | 4 [   ] | |
|  | |  | | --- | | green | | |  | | --- | | Sweet46 | | |  | | --- | | 5 [   ] | |
|  |  |  |  |
|  |  |  |  |
| |  | | --- | | **5.12** |  |  | | --- | | **(43)** | | |  | | --- | | **Fruit: number of locules** | |  |  |
|  | |  | | --- | | predominantly two | | |  | | --- | | De Cayenne | | |  | | --- | | 1 [   ] | |
|  | |  | | --- | | equally two and three | | |  | | --- | | Banán | | |  | | --- | | 2 [   ] | |
|  | |  | | --- | | predominantly three | | |  | | --- | | Century | | |  | | --- | | 3 [   ] | |
|  | |  | | --- | | equally three and four | | |  | | --- | | Lamuyo, Sonar | | |  | | --- | | 4 [   ] | |
|  | |  | | --- | | predominantly four | | |  | | --- | | PAZ szentesi | | |  | | --- | | 5 [   ] | |
|  |  |  |  |
|  |  |  |  |
| |  | | --- | | **5.13** |  |  | | --- | | **(45)** | | |  | | --- | | **Fruit: capsaicin in placenta** | |  |  |
|  | |  | | --- | | absent | | |  | | --- | | Sonar, Sweet banana | | |  | | --- | | 1 [   ] | |
|  | |  | | --- | | present | | |  | | --- | | De Cayenne | | |  | | --- | | 9 [   ] | |
|  |  |  |  |
|  |  |  |  |
| |  | | --- | | **5.14** |  |  | | --- | | **(51)** | | |  | | --- | | **Resistance to Tobamovirus - *Tobacco mosaic virus* - Pathotype 0 (TMV: 0)** | |  |  |
|  | |  | | --- | | absent | | |  | | --- | | Lamu, Pepita, Piquillo | | |  | | --- | | 1 [   ] | |
|  | |  | | --- | | present | | |  | | --- | | Fehérözön, Turia, Yolo Wonder | | |  | | --- | | 9 [   ] | |
|  |  |  |  |

|  | Characteristics | Example Varieties | Note |
| --- | --- | --- | --- |
|  |  |  |  |
| |  | | --- | | **5.15** |  |  | | --- | | **(52)** | | |  | | --- | | **Resistance to Tobamovirus - *Pepper mild mottle virus* - Pathotype 1.2 (PMMoV: 1.2)** | |  |  |
|  | |  | | --- | | absent | | |  | | --- | | Fehérözön, Lamu, Turia, Yolo Wonder | | |  | | --- | | 1 [   ] | |
|  | |  | | --- | | present | | |  | | --- | | Candela, Ferrari | | |  | | --- | | 9 [   ] | |
|  |  |  |  |
|  |  |  |  |
| |  | | --- | | **5.16** |  |  | | --- | | **(53)** | | |  | | --- | | **Resistance to Tobamovirus - *Pepper mild mottle virus* - Pathotype 1.2.3 (PMMoV: 1.2.3)** | |  |  |
|  | |  | | --- | | absent | | |  | | --- | | Solario, Yolo Wonder | | |  | | --- | | 1 [   ] | |
|  | |  | | --- | | present | | |  | | --- | | Allrounder | | |  | | --- | | 9 [   ] | |
|  |  |  |  |
|  |  |  |  |
| |  | | --- | | **5.17** |  |  | | --- | | **(54)** | | |  | | --- | | **Resistance to *Potato Y virus* (PVY) - Pathotype 0 (PVY: 0)** | |  |  |
|  | |  | | --- | | absent | | |  | | --- | | Ferrari, Piquillo, Yolo Wonder | | |  | | --- | | 1 [   ] | |
|  | |  | | --- | | present | | |  | | --- | | Florida VR2 | | |  | | --- | | 9 [   ] | |
|  |  |  |  |
|  |  |  |  |
| |  | | --- | | **5.18** |  |  | | --- | | **(59)** | | |  | | --- | | **Resistance to *Tomato spotted wilt virus* Pathotype 0 (TSWV: 0)** | |  |  |
|  | |  | | --- | | absent | | |  | | --- | | Lamuyo, Yolo Wonder | | |  | | --- | | 1 [   ] | |
|  | |  | | --- | | present | | |  | | --- | | Galileo | | |  | | --- | | 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* | |  | | --- | |  | | |  | | --- | |  | | |  | | --- | |  | | |  |  |  |  | |  |  |  |  | |  |  |  |  | | | |  | 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 | | | | |  |  |  |  |  | |

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