|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | |  | **E** | | |  | |  |  | | |  | | wordml://75.png | |  | | --- | | **TG/105/5(proj.3)** | | **ORIGINAL:** English | | **DATE:** 2023-03-18 | | | | **INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS** | | | | | |  | | Geneva |  | | |  | | |  |  |  | | --- | --- | --- | |  |  |  | |  | DRAFT |  | |  |  |  | |  | | |  | |  |  | | |  | **CHINESE CABBAGE**  UPOV Code(s): BRASS\_RAP\_PEK; BRASS\_RAP\_PCH; BRASS\_RAP\_PRA; BRASS\_TUR  *Brassica rapa* L. subsp. *pekinensis* (Lour.) Kitam.;  hybrids between *Brassica rapa* L. Emend. Metzg. ssp. *pekinensis* (Lour.) Hanelt and *Brassica rapa* L. Emend. Metzg. ssp. *chinensis* (L.) Hanelt;  hybrids between *Brassica rapa* L. Emend. Metzg. ssp. *pekinensis* (Lour.) Hanelt and *Brassica rapa* L. var. *rapa* (L.) Thell.;  *Brassica* ×*turicensis* O. E. Schulz & Thell. | | | |  | | --- | | \* | | | |  | |  |  | | | |  | | --- | | **GUIDELINES** | |  | | **FOR THE CONDUCT OF TESTS** | |  | | **FOR DISTINCTNESS, UNIFORMITY AND STABILITY** | | | | | | |  | |  |  | | | |  | | --- | | *prepared by experts from the Republic of Korea* | | *to be considered by the* | | |  | | --- | | *Technical Working Party for Vegetables* | | | *at its fifty-seventh session, to be held in Antalya, Türkiye,* | | |  | | --- | | *from 2023-05-01 to 2023-05-05* | | | | | | | | *Disclaimer: this document does not represent UPOV policies or guidance* | | | | | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  | | --- | | Alternative names:\* | | | | | | | |  | | --- | |  | | | | | | | *Botanical name* | *English* | *French* | *German* | *Spanish* | | |  | | --- | | *Brassica rapa* L. subsp. *pekinensis* (Lour.) Kitam. , *Brassica campestris* subsp. *pekinensis* (Lour.) G. Olsson, *Brassica pekinensis* (Lour.) Rupr., *Brassica pe-tsai* L. H. Bailey, *Brassica rapa* subvar. *pe-tsai* (L. H. Bailey) Kitam., *Brassica rapa* var. *glabra* Regel, *Sinapis pekinensis* Lour. | | |  | | --- | | Chinese Cabbage | | |  | | --- | | Chou chinois | | |  | | --- | | Chinakohl | | |  | | --- | | Repollo chino | | | |  | | --- | | hybrids between *Brassica rapa* L. Emend. Metzg. ssp. *pekinensis* (Lour.) Hanelt and *Brassica rapa* L. Emend. Metzg. ssp. *chinensis* (L.) Hanelt | | |  | | --- | |  | | |  | | --- | |  | | |  | | --- | |  | | |  | | --- | |  | | | |  | | --- | | hybrids between *Brassica rapa* L. Emend. Metzg. ssp. *pekinensis* (Lour.) Hanelt and *Brassica rapa* L. var. *rapa* (L.) Thell. | | |  | | --- | |  | | |  | | --- | |  | | |  | | --- | |  | | |  | | --- | |  | | | |  | | --- | | *Brassica* ×*turicensis* O. E. Schulz & Thell. , *Brassica juncea* × *Brassica rapa* ssp. *Pekinensis* | | |  | | --- | |  | | |  | | --- | |  | | |  | | --- | |  | | |  | | --- | |  | | | | | |  |  |  | | 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. | |  | | | | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  | | --- | --- | | TABLE OF CONTENTS | PAGE | |  |  | | |  |  |  | | --- | --- | --- | | 1. | SUBJECT OF THESE TEST GUIDELINES.......................................................................................................... | [4](#Section1) | |  |  |  | | 2. | MATERIAL REQUIRED..................................................................................................................... | [4](#Section2) | |  |  |  | | 3. | METHOD OF EXAMINATION............................................................................................................... | [4](#Section3) | |  |  |  | |  | |  |  |  | | --- | --- | --- | | 3.1 | Number of Growing Cycles................................................................................................................. | [4](#Section3-1) | | 3.2 | Testing Place................................................................................................................... | [4](#Section3-2) | | 3.3 | Conditions for Conducting the Examination............................................................................................... | [4](#Section3-3) | | 3.4 | Test Design................................................................................................................. | [6](#Section3-4) | | 3.5 | Additional Tests................................................................................................................... | [6](#Section3-5) | | | |  |  |  | | 4. | ASSESSMENT OF DISTINCTNESS, UNIFORMITY AND STABILITY................................................................. | [6](#Section4) | |  |  |  | |  | |  |  |  | | --- | --- | --- | | 4.1 | Distinctness.......................................................................................................... | [6](#Section4-1) | | 4.2 | Uniformity............................................................................................................ | [7](#Section4-2) | | 4.3 | Stability............................................................................................................... | [7](#Section4-3) | | | |  |  |  | | 5. | GROUPING OF VARIETIES AND ORGANIZATION OF THE GROWING TRIAL................................................ | [8](#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................................................................................................................. | [10](#Section6-5) | | | |  |  |  | | 7. | TABLE OF CHARACTERISTICS/TABLEAU DES CARACTÈRES/MERKMALSTABELLE/TABLA DE CARACTERES.................................................................................................................. | [11](#Section7) | |  |  |  | | 8. | EXPLANATIONS ON THE TABLE OF CHARACTERISTICS............................................................................... | [24](#Section8) | |  | |  |  |  | | --- | --- | --- | | 8.1 | Explanations covering several characteristics........................................................................................... | [24](#Section8-1) | | |  | | --- | | 8.2 | | Explanations for individual characteristics................................................................................................. | [25](#Section8-2) | | | |  |  |  | | 9. | LITERATURE................................................................................................................... | [33](#Section9) | |  |  |  | | 10 | TECHNICAL QUESTIONNAIRE............................................................................................................ | [34](#Section10) | |  |  |  | |  | |  | | --- | |  | |  | | | |

|  |  |
| --- | --- |
| 1. | Subject of these Test Guidelines |
|  |  |
|  | |  | | --- | | These Test Guidelines apply to all varieties of *Brassica rapa* L. subsp. *pekinensis* (Lour.) Kitam., hybrids between *Brassica rapa* L. Emend. Metzg. ssp. *pekinensis* (Lour.) Hanelt and *Brassica rapa* L. Emend. Metzg. ssp. *chinensis* (L.) Hanelt, hybrids between *Brassica rapa* L. Emend. Metzg. ssp. *pekinensis* (Lour.) Hanelt and *Brassica rapa* L. var. *rapa* (L.) Thell. and *Brassica* ×*turicensis* O. E. Schulz & Thell. | |

|  |  |
| --- | --- |
|  |  |
|  |  |
| 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. | |
|  |  |
| 2.3 | |  | | --- | | The minimum quantity of plant material, to be supplied by the applicant, should be: | |
|  |  |
|  | |  | | --- | | 10 g or 2,000 seeds | |
|  |  |
|  | The seed should meet the minimum requirements for germination, species and analytical purity, health and moisture content, specified by the competent authority. In cases where the seed is to be stored, the germination capacity should be as high as possible and should, be stated by the applicant. |
|  |  |
| 2.4 | |  | | --- | | The plant material supplied should be visibly healthy, not lacking in vigor, nor affected by any important pest or disease. | |
|  |  |
| 2.5 | |  | | --- | | The plant material should not have undergone any treatment which would affect the expression of the characteristics of the variety, unless the competent authorities allow or request such treatment. If it has been treated, full details of the treatment must be given. | |

|  |  |
| --- | --- |
|  |  |
|  |  |
| 3. | Method of Examination |
|  |  |
| *3.1* | *Number of Growing Cycles* |
|  |  |
| |  | | --- | | 3.1.1 | | The minimum duration of tests should normally be two independent growing cycles. |
|  |  |
| |  | | --- | | 3.1.2 | | The two independent growing cycles should be in the form of two separate plantings. |
|  |  |
| |  | | --- | | 3.1.3 | | 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* |
|  |  |
| 3.4.1 | |  | | --- | | Each test should be designed to result in a total of at least 60 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. | |
|  |  |

|  |  |  |
| --- | --- | --- |
| |  | | --- | |  |   *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 20 plants or parts of plants taken from each of 20 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 seed-propagated varieties including cross-pollinated and hybrid 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 should be according to the recommendations for cross-pollinated varieties in the General Introduction. |
|  |  |
| 4.2.4 | |  | | --- | | For the assessment of uniformity of single cross hybrid 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 60 plants, 2 off-types are allowed. | |
|  |  |
| *4.3* | *Stability* |
|  |  |
| 4.3.1 | In practice, it is not usual to perform tests of stability that produce results as certain as those of the testing of distinctness and uniformity. However, experience has demonstrated that, for many types of variety, when a variety has been shown to be uniform, it can also be considered to be stable. |
|  |  |
| 4.3.2 | Where appropriate, or in cases of doubt, stability may be further examined by testing a new seed stock to ensure that it exhibits the same characteristics as those shown by the initial material supplied. |

|  |  |
| --- | --- |
| 5. | Grouping of Varieties and Organization of the Growing Trial |
|  |  |
| 5.1 | The selection of varieties of common knowledge to be grown in the trial with the candidate varieties and the way in which these varieties are divided into groups to facilitate the assessment of distinctness are aided by the use of grouping characteristics. |
|  |  |
| 5.2 | Grouping characteristics are those in which the documented states of expression, even where produced at different locations, can be used, either individually or in combination with other such characteristics: (a) to select varieties of common knowledge that can be excluded from the growing trial used for examination of distinctness; and (b) to organize the growing trial so that similar varieties are grouped together. |
|  |  |
| 5.3 | The following have been agreed as useful grouping characteristics: |
|  | |  |  |  | | --- | --- | --- | |  |  |  | | |  | | --- | | (a) | |  | |  | | --- | | Plant: height (characteristic 2) | | | |  | | --- | | (b) | |  | |  | | --- | | Head: shape in longitudinal section (characteristic 24) | | | |  | | --- | | (c) | |  | |  | | --- | | Head: degree of closing of leaves  (characteristic 25) | | | |  | | --- | | (d) | |  | |  | | --- | | Time of harvest maturity (characteristic 32) | | | |  |  | | --- | --- | | |  | | --- | |  | | | | | |
| 5.4 | Guidance for the use of grouping characteristics, in the process of examining distinctness, is provided through the General Introduction and document TGP/9 “Examining Distinctness”. |

|  |  |
| --- | --- |
|  |  |
|  |  |

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

|  |  |
| --- | --- |
| *6.4* | *Example Varieties* |
|  | Where appropriate, example varieties are provided to clarify the states of expression of each characteristic. |

|  |  |
| --- | --- |
| *6.5* | *Legend* |
|  |  |
| |  |  | English | | français | | deutsch | español | Example Varieties Exemples Beispielssorten Variedades ejemplo | Note/ Nota | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | | **1** | | |  | | --- | | **2** | | |  | | --- | | **3** | | |  | | --- | | **4** | | |  | | --- | | **5** | | |  | | --- | | **6** | | |  | | --- | | **7** | | | | | |  |  | |  | | --- | | **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** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | erect | |  | |  |  | Golden boy, Granaat | 1 |
|  |  | semi-erect | |  | |  |  | Bilko, Daetong, Muso | 2 |
|  |  | spreading | |  | |  |  | Lycofresh Gimjang | 3 |
| **2.** | **(\*)** | **QN** | **MS/VG** |  | **(a)** |  | | | |
|  |  | |  | | --- | | **Plant: height** | | |  | |  |  |  |  |
|  |  | very short | |  | |  |  |  | 1 |
|  |  | very short to short | |  | |  |  |  | 2 |
|  |  | short | |  | |  |  | Natsuki, TheHan1ho | 3 |
|  |  | short to medium | |  | |  |  |  | 4 |
|  |  | medium | |  | |  |  | Bilko, Daetong, Muso | 5 |
|  |  | medium to tall | |  | |  |  |  | 6 |
|  |  | tall | |  | |  |  | Monument, Shousai, Wonkyo20036ho | 7 |
|  |  | tall to very tall | |  | |  |  |  | 8 |
|  |  | very tall | |  | |  |  |  | 9 |
| **3.** |  | **QN** | **MS/VG** |  | **(a)** |  | | | |
|  |  | |  | | --- | | **Outer leaf: length** | | |  | |  |  |  |  |
|  |  | very short | |  | |  |  |  | 1 |
|  |  | very short to short | |  | |  |  |  | 2 |
|  |  | short | |  | |  |  | Golden boy,  Summer Salad, TheHan1ho | 3 |
|  |  | short to medium | |  | |  |  |  | 4 |
|  |  | medium | |  | |  |  | Daetong, Muso | 5 |
|  |  | medium to long | |  | |  |  |  | 6 |
|  |  | long | |  | |  |  | Shousai, Wonkyo20036ho | 7 |
|  |  | long to very long | |  | |  |  |  | 8 |
|  |  | very long | |  | |  |  |  | 9 |
| **4.** |  | **QN** | **MS/VG** | **(+)** | **(a)** |  | | | |
|  |  | |  | | --- | | **Outer leaf: width** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | very narrow | |  | |  |  |  | 1 |
|  |  | very narrow to narrow | |  | |  |  |  | 2 |
|  |  | narrow | |  | |  |  | Jinhongssam,  Summer Salad | 3 |
|  |  | narrow to medium | |  | |  |  |  | 4 |
|  |  | medium | |  | |  |  | Daetong, Muso | 5 |
|  |  | medium to broad | |  | |  |  |  | 6 |
|  |  | broad | |  | |  |  | Bando, Lycofresh Gimjang | 7 |
|  |  | broad to very broad | |  | |  |  |  | 8 |
|  |  | very broad | |  | |  |  |  | 9 |
| **5.** | **(\*)** | **PQ** | **VG** | **(+)** | **(a)** |  | | | |
|  |  | |  | | --- | | **Outer leaf: shape** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | circular | |  | |  |  | Bingsu, Kenshin | 1 |
|  |  | broad obovate | |  | |  |  | Daetong, Kaho | 2 |
|  |  | medium obovate | |  | |  |  | Muso, Suho | 3 |
|  |  | narrow obovate | |  | |  |  | Lycofresh Gimjang | 4 |
|  |  | elongated obovate | |  | |  |  | Shousai, Wonkyo20036ho | 5 |
| **6.** |  | **PQ** | **VG** | **(+)** | **(a)** |  | | | |
|  |  | |  | | --- | | **Outer leaf: shape of apex** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | obtuse | |  | |  |  | Shousai | 1 |
|  |  | rounded | |  | |  |  | Daetong, Muso | 2 |
|  |  | truncated | |  | |  |  | Lycofresh Gimjang, Ousho | 3 |
| **7.** | **(\*)** | **QN** | **VG** |  | **(a)** |  | | | |
|  |  | |  | | --- | | **Outer leaf: number of blisters on upper side** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | very few | |  | |  |  |  | 1 |
|  |  | very few to few | |  | |  |  |  | 2 |
|  |  | few | |  | |  |  | Granaat, Kinap, Sprinter | 3 |
|  |  | few to medium | |  | |  |  |  | 4 |
|  |  | medium | |  | |  |  | Daetong, Muso, Parkin | 5 |
|  |  | medium to many | |  | |  |  |  | 6 |
|  |  | many | |  | |  |  | Enduro, Jindaebak, Ming | 7 |
|  |  | many to very many | |  | |  |  |  | 8 |
|  |  | very many | |  | |  |  |  | 9 |
| **8.** |  | **QN** | **VG** | **(+)** | **(a)** |  | | | |
|  |  | |  | | --- | | **Outer leaf: size of blisters on upper side** | | |  | |  |  |  |  |
|  |  | very small | |  | |  |  |  | 1 |
|  |  | very small to small | |  | |  |  |  | 2 |
|  |  | small | |  | |  |  | Granaat | 3 |
|  |  | small to medium | |  | |  |  |  | 4 |
|  |  | medium | |  | |  |  | Daetong, Parkin | 5 |
|  |  | medium to large | |  | |  |  |  | 6 |
|  |  | large | |  | |  |  | Bingsu, Enduro | 7 |
|  |  | large to very large | |  | |  |  |  | 8 |
|  |  | very large | |  | |  |  |  | 9 |
| **9.** | **(\*)** | **QL** | **VG** |  | **(a)** |  | | | |
|  |  | |  | | --- | | **Outer leaf: main color** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | green | |  | |  |  | Daetong,  EX King santosai, Hayamidori, Kaho, Muso, Parkin, Sprinkin | 1 |
|  |  | purple | |  | |  |  | Jinhongssam, Kwonnongppalgang,  Red Dragon | 2 |
| **10.** |  | **QN** | **VG** |  | **(a)** |  | | | |
|  |  | |  | | --- | | **Outer leaf : Intensity of color** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | very light | |  | |  |  | EX King santosai | 1 |
|  |  | very light to light | |  | |  |  |  | 2 |
|  |  | light | |  | |  |  | Kaho, Red Dragon | 3 |
|  |  | light to medium | |  | |  |  |  | 4 |
|  |  | medium | |  | |  |  | Daetong, Kwonnongppalgang, Muso, Sprinkin | 5 |
|  |  | medium to dark | |  | |  |  |  | 6 |
|  |  | dark | |  | |  |  | Hayamidori, Jinhongssam, Parkin, TheHan1ho | 7 |
|  |  | dark to very dark | |  | |  |  |  | 8 |
|  |  | very dark | |  | |  |  |  | 9 |
| **11.** |  | **QN** | **VG** |  | **(a)** |  | | | |
|  |  | |  | | --- | | **Outer leaf: glossiness** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | very weak | |  | |  |  |  | 1 |
|  |  | very weak to weak | |  | |  |  |  | 2 |
|  |  | weak | |  | |  |  | Hanko, Kaho, Kinap | 3 |
|  |  | weak to medium | |  | |  |  |  | 4 |
|  |  | medium | |  | |  |  | Daetong, Muso | 5 |
|  |  | medium to dark | |  | |  |  |  | 6 |
|  |  | strong | |  | |  |  | Shunjyu | 7 |
|  |  | dark to very dark | |  | |  |  |  | 8 |
|  |  | very dark | |  | |  |  |  | 9 |
| **12.** |  | **QN** | **VG** | **(+)** | **(a)** |  | | | |
|  |  | |  | | --- | | **Outer leaf: hairiness** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | absent or very weak | |  | |  |  | Bingsu, Summer Salad | 1 |
|  |  | weak | |  | |  |  | Cream, Kinap | 2 |
|  |  | medium | |  | |  |  | Daetong, Shunjyu, Tardisto | 3 |
|  |  | strong | |  | |  |  | Jinhongssam, Muso | 4 |
|  |  | very strong | |  | |  |  |  | 5 |
| **13.** |  | **QN** | **VG** | **(+)** | **(a)** |  | | | |
|  |  | |  | | --- | | **Outer leaf: profile in longitudinal section** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | concave | |  | |  |  | Bilko, Parkin | 1 |
|  |  | straight | |  | |  |  | Daetong, Monument | 2 |
|  |  | convex | |  | |  |  | Hanko | 3 |
| **14.** |  | **QN** | **VG** | **(+)** | **(a)** |  | | | |
|  |  | |  | | --- | | **Outer Leaf: undulation of margin** | | |  | |  |  |  |  |
|  |  | absent or very weak | |  | |  |  |  | 1 |
|  |  | weak | |  | |  |  | Jinhongssam, Kaho,  Red Dragon | 2 |
|  |  | medium | |  | |  |  | Hanko, Suho | 3 |
|  |  | strong | |  | |  |  | Monument | 4 |
|  |  | very strong | |  | |  |  | Shin-aduma, Wonkyo20036ho | 5 |
| **15.** |  | **QN** | **VG** | **(+)** | **(a)** |  | | | |
|  |  | |  | | --- | | **Outer leaf: incisions of margin on distal part** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | absent or weak | |  | |  |  | Hanko, Jinhongssam, Kenshin | 1 |
|  |  | medium | |  | |  |  | Kasumi,  Lycofresh Gimjang | 2 |
|  |  | strong | |  | |  |  | Wonkyo20036ho | 3 |
| **16.** |  | **QN** | **VG** | **(+)** | **(a)** |  | | | |
|  |  | |  | | --- | | **Outer leaf: dentation of margin on basal part** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | absent or weak | |  | |  |  | Hanko, Jinhongssam, Kinap | 1 |
|  |  | weak to medium | |  | |  |  |  | 2 |
|  |  | medium | |  | |  |  | Daetong, Enduro | 3 |
|  |  | medium to strong | |  | |  |  |  | 4 |
|  |  | strong | |  | |  |  | Sinrok Utgari, Wonkyo20036ho | 5 |
| **17.** |  | **QN** | **MS/VG** | **(+)** | **(a)** |  | | | |
|  |  | |  | | --- | | **Outer leaf: length of midrib** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | very short | |  | |  |  |  | 1 |
|  |  | very short to short | |  | |  |  |  | 2 |
|  |  | short | |  | |  |  | Hamamidori | 3 |
|  |  | short to medium | |  | |  |  |  | 4 |
|  |  | medium | |  | |  |  | Daetong, Muso | 5 |
|  |  | medium to long | |  | |  |  |  | 6 |
|  |  | long | |  | |  |  | RCC65, Shousai, Wonkyo20036ho | 7 |
|  |  | long to very long | |  | |  |  |  | 8 |
|  |  | very long | |  | |  |  |  | 9 |
| **18.** |  | **QN** | **MS/VG** | **(+)** | **(a)** |  | | | |
|  |  | |  | | --- | | **Outer leaf: width of midrib** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | very narrow | |  | |  |  |  | 1 |
|  |  | very narrow to narrow | |  | |  |  |  | 2 |
|  |  | narrow | |  | |  |  | Shousai, Wonkyo20036ho | 3 |
|  |  | narrow to medium | |  | |  |  |  | 4 |
|  |  | medium | |  | |  |  | Enduro, Jinhongssam, Red Dragon | 5 |
|  |  | medium to broad | |  | |  |  |  | 6 |
|  |  | broad | |  | |  |  | Gorki, Harumaki 1 go, Jindaebak | 7 |
|  |  | broad to very broad | |  | |  |  |  | 8 |
|  |  | very broad | |  | |  |  |  | 9 |
| **19.** |  | **QN** | **VG** | **(+)** | **(a)** |  | | | |
|  |  | |  | | --- | | **Outer leaf: midrib in cross section** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | flat | |  | |  |  | Hanko, Kinap, Suho | 1 |
|  |  | flat to concave | |  | |  |  | Lycofresh Gimjang | 2 |
|  |  | concave | |  | |  |  | Bilko, Jinhongssam, Parkin | 3 |
| **20.** |  | **QN** | **MS/VG** | **(+)** | **(a)** |  | | | |
|  |  | |  | | --- | | **Outer leaf: thickness of midrib** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | thin | |  | |  |  | RCC65 | 1 |
|  |  | thin to medium | |  | |  |  |  | 2 |
|  |  | medium | |  | |  |  | Daetong | 3 |
|  |  | medium to thick | |  | |  |  |  | 4 |
|  |  | thick | |  | |  |  | Jinhongssam | 5 |
| **21.** |  | **PQ** | **VG** | **(+)** | **(a)** |  | | | |
|  |  | |  | | --- | | **Outer leaf: color of midrib** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | white | |  | |  |  | Daetong,  Lycofresh Gimjang, Muso | 1 |
|  |  | green | |  | |  |  | Jincai3, Jinlv60 | 2 |
|  |  | purple | |  | |  |  | RCC65, Red Dragon | 3 |
| **22.** |  | **QN** | **MS/VG** |  | **(b)** |  | | | |
|  |  | |  | | --- | | **Head: height** | | |  | |  |  |  |  |
|  |  | very short | |  | |  |  |  | 1 |
|  |  | very short to short | |  | |  |  |  | 2 |
|  |  | short | |  | |  |  | Golden boy | 3 |
|  |  | short to medium | |  | |  |  |  | 4 |
|  |  | medium | |  | |  |  | Muso, Parkin, Sprinkin, Suho | 5 |
|  |  | medium to tall | |  | |  |  |  | 6 |
|  |  | tall | |  | |  |  | Jinhongssam, Monument, Shousai | 7 |
|  |  | tall to very tall | |  | |  |  |  | 8 |
|  |  | very tall | |  | |  |  |  | 9 |
| **23.** |  | **QN** | **MS/VG** | **(+)** | **(b)** |  | | | |
|  |  | |  | | --- | | **Head: width** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | very narrow | |  | |  |  |  | 1 |
|  |  | very narrow to narrow | |  | |  |  |  | 2 |
|  |  | narrow | |  | |  |  | Granaat, Jinhongssam | 3 |
|  |  | narrow to medium | |  | |  |  |  | 4 |
|  |  | medium | |  | |  |  | Muso, TheHan1ho | 5 |
|  |  | medium to broad | |  | |  |  |  | 6 |
|  |  | broad | |  | |  |  | Jindaebak | 7 |
|  |  | broad to very broad | |  | |  |  |  | 8 |
|  |  | very broad | |  | |  |  |  | 9 |
| **24.** | **(\*)** | **PQ** | **VG** | **(+)** | **(b)** |  | | | |
|  |  | |  | | --- | | **Head: shape in longitudinal section** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | circular | |  | |  |  | Kenshin | 1 |
|  |  | elliptic | |  | |  |  | Hayamidori, TheHan1ho | 2 |
|  |  | ovate | |  | |  |  | Daetong, Shinjyu | 3 |
|  |  | obovate | |  | |  |  | Gorki, Hamamidori | 4 |
|  |  | oblong | |  | |  |  | Chushu, Golden boy, Hanko | 5 |
|  |  | narrow oblong | |  | |  |  | Granaat, Jinhongssam, Shousai | 6 |
| **25.** | **(\*)** | **QN** | **VG** | **(+)** | **(b)** |  | | | |
|  |  | |  | | --- | | **Head: degree of closing of leaves** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | open | |  | |  |  | Jinhongssam | 1 |
|  |  | open to half-open | |  | |  |  |  | 2 |
|  |  | half-open | |  | |  |  | Daetong, Spectrum | 3 |
|  |  | half-open to closed | |  | |  |  |  | 4 |
|  |  | closed | |  | |  |  | Golden boy, Kinap, Muso | 5 |
| **26.** |  | **PQ** | **VG** |  | **(b)** |  | | | |
|  |  | |  | | --- | | **Head: color of top** | | |  | |  |  |  |  |
|  |  | white | |  | |  |  | Xinxiashuai | 1 |
|  |  | yellow green | |  | |  |  | Bingsu, Kasumi | 2 |
|  |  | green | |  | |  |  | Daetong,  Lycofresh Gimjang, Muso | 3 |
|  |  | dark green | |  | |  |  | Bando | 4 |
|  |  | purple | |  | |  |  | Jinhongssam,  Red Dragon | 5 |
| **27.** |  | **QN** | **VG** | **(+)** | **(b)** |  | | | |
|  |  | |  | | --- | | **Head: blistering of wrapper leaf** | | |  | |  |  |  |  |
|  |  | absent or very weak | |  | |  |  |  | 1 |
|  |  | weak | |  | |  |  | Granaat | 2 |
|  |  | medium | |  | |  |  | Gorki, Jinhongssam | 3 |
|  |  | strong | |  | |  |  | Daetong, Enduro | 4 |
|  |  | very strong | |  | |  |  | TheHan1ho | 5 |
| **28.** | **(\*)** | **PQ** | **VG** | **(+)** | **(b)** |  | | | |
|  |  | |  | | --- | | **Head: internal color** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | whitish | |  | |  |  | Bilko, Parkin | 1 |
|  |  | light yellow | |  | |  |  | Golden boy | 2 |
|  |  | medium yellow | |  | |  |  | Daetong, Enduro, Hanko | 3 |
|  |  | dark yellow | |  | |  |  | TheHan1ho | 4 |
|  |  | orange | |  | |  |  | Orange Queen | 5 |
|  |  | purple | |  | |  |  | Jinhongssam,  Red Dragon | 6 |
| **29.** |  | **QN** | **VG** |  | **(b)** |  | | | |
|  |  | |  | | --- | | **Head: firmness** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | very loose | |  | |  |  | Jinhongssam | 1 |
|  |  | very loose to loose | |  | |  |  |  | 2 |
|  |  | loose | |  | |  |  | Granaat, RCC65 | 3 |
|  |  | loose to medium | |  | |  |  |  | 4 |
|  |  | medium | |  | |  |  | Gorki, Lycofresh Gimjang | 5 |
|  |  | medium to firm | |  | |  |  |  | 6 |
|  |  | firm | |  | |  |  | Bando, Bazuko, Suho | 7 |
|  |  | firm to very firm | |  | |  |  |  | 8 |
|  |  | very firm | |  | |  |  | Shunjyu | 9 |
| **30.** |  | **PQ** | **VG** | **(+)** | **(b)** |  | | | |
|  |  | |  | | --- | | **Head: shape of apex of internal stem** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | pointed | |  | |  |  | Kaho, Wonkyo20036ho | 1 |
|  |  | round | |  | |  |  | Bilko, Muso, Parkin | 2 |
|  |  | truncate | |  | |  |  | Jindaebak, Syunju | 3 |
| **31.** |  | **QL** | **VG** | **(+)** | **(b)** |  | | | |
|  |  | |  | | --- | | **Head: coloration in vascular bundle of internal stem** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | absent | |  | |  |  | Daetong | 1 |
|  |  | present | |  | |  |  | Betafresh | 9 |
| **32.** | **(\*)** | **QN** | **MG/VG** |  | **(b)** |  | | | |
|  |  | |  | | --- | | **Time of harvest maturity** | | |  | |  |  |  |  |
|  |  | very early | |  | |  |  | Kenshin | 1 |
|  |  | very early to early | |  | |  |  |  | 2 |
|  |  | early | |  | |  |  | Blues, RCC65, Sprinkin | 3 |
|  |  | early to medium | |  | |  |  |  | 4 |
|  |  | medium | |  | |  |  | Enduro, Muso, Suho | 5 |
|  |  | medium to late | |  | |  |  |  | 6 |
|  |  | late | |  | |  |  | Chusyu, Jindaebak, Parkin, Red Dragon | 7 |
|  |  | late to very late | |  | |  |  |  | 8 |
|  |  | very late | |  | |  |  |  | 9 |
| **33.** |  | **QL** | **VG** | **(+)** | **(c)** |  | | | |
|  |  | |  | | --- | | **Male sterility** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | absent | |  | |  |  | Kasumi, Suho | 1 |
|  |  | present | |  | |  |  | Cheonggwang, Hanko, Red Dragon | 9 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  | | --- | --- | --- | --- | | 8. | Explanations on the Table of Characteristics | | | |  | | | | | *8.1* | *Explanations covering several characteristics* | | | |  | |  | | --- | |  | | | | |  |  |  |  | |  | Characteristics containing the following key in the Table of Characteristics should be examined as indicated below: | | | |  | | | | | |  | | --- | | (a) | | |  | | --- | | Observation should be made at the beginning of head formation, before harvest maturity. | | | | |  |  |  |  | | |  | | --- | | (b) | | |  | | --- | | Observations should be made at harvest maturity. | | | | |  |  |  |  | | |  | | --- | | (c) | | |  | | --- | | Observations should be made at the flowering period | | | | |  |  |  |  | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | |  | | --- | | *8.2* | | *Explanations for individual characteristics* | |  | | | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | Ad. 1: Plant: habit  http://www.wipo.int/birt/images/2615/10.JPG   |  |  |  | | --- | --- | --- | | 1 | 2 | 3 | | erect | semi-erect | spreading | | | | | |  | | --- | | Ad. 4: Outer leaf: width  Observation should be made on the broadest part. | | | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Ad. 5: Outer leaf: shape     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  | | --- | --- | --- | --- | --- | | wordml://76.png | wordml://77.png | wordml://78.png | wordml://79.png | wordml://80.png | | 1 | 2 | 3 | 4 | 5 | | circular | broad obovate | medium obovate | narrow obovate | elongated obovate | | | | | | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | Ad. 6: Outer leaf: shape of apex  http://www.wipo.int/birt/images/2615/6.JPG   |  |  |  | | --- | --- | --- | | 1 | 2 | 3 | | obtuse | rounded | truncated | | | | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Ad. 8: Outer leaf: size of blisters on upper side     |  |  |  | | --- | --- | --- | | wordml://81.png | wordml://82.png | wordml://83.png | | 3 | 5 | 7 | | small | medium | large | | | | |  | | --- | | Ad. 12: Outer leaf: hairiness  Observations should be made on the lower side. | | | |  | | --- | | Ad. 13: Outer leaf: profile in longitudinal section  Observations should be excluding leaf base. | | | |  | | --- | | Ad. 14: Outer Leaf: undulation of margin  wordml://84.png | | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | |  |  | | --- | --- | | Ad. 15: Outer leaf: incisions of margin on distal part  Observation should be made on distal part of leaf.   |  | | --- | | wordml://85.png |   wordml://86.png | | | |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Ad. 16: Outer leaf: dentation of margin on basal part  See Ad. 15  Observations should be made on the base part of leaf.  ​   |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | wordml://87.png | wordml://88.png | wordml://89.png | | 1 | 3 | 5 | | absent or weak | medium | strong | | | | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  | | --- | --- | | |  | | --- | | Ad. 17: Outer leaf: length of midrib  wordml://90.png  wordml://91.png | | | |  | | --- | | Ad. 18: Outer leaf: width of midrib  See Ad.17 | | | |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Ad. 19: Outer leaf: midrib in cross section  See Ad.17  Observation should be made at 4~6cm from leaf base     |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | wordml://92.png | wordml://93.png | wordml://94.png | | 1 | 2 | 3 | | flat | flat to concave | concave | | | | |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| |  |  | | --- | --- | | |  | | --- | | Ad. 20: Outer leaf: thickness of midrib  Observations should be made at the midpoint of the midrib where the characteristic 19 is observed.  wordml://95.png | | | |  | | --- | | Ad. 21: Outer leaf: color of midrib  Observations should be made on inner side of leaf | | | |  | | --- | | Ad. 23: Head: width  Observations should be made on the broadest part. | | |

|  |  |  |
| --- | --- | --- |
| |  |  | | --- | --- | | |  | | --- | | Ad. 24: Head: shape in longitudinal section  wordml://96.png | | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Ad. 25: Head: degree of closing of leaves   |  |  |  | | --- | --- | --- | | wordml://97.png | wordml://98.png | wordml://99.png | | 1 | 3 | 5 | | open | half-open | closed | | | | |  | | --- | | Ad. 27: Head: blistering of wrapper leaf  wordml://100.png | | | |  | | --- | | Ad. 28: Head: internal color  Observations should be made on upper part in longitudinal section. | | | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | Ad. 30: Head: shape of apex of internal stem  http://www.wipo.int/birt/images/2615/apex-11_(620).jpg   |  |  |  | | --- | --- | --- | | 1 | 2 | 3 | | pointed | round | truncate | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | | Ad. 31: Head: coloration in vascular bundle of internal stem  http://www.wipo.int/birt/images/2615/coloration_in_vascular_bundle-420.jpg   |  |  | | --- | --- | | 1 | 9 | | absent | present | | | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | Ad. 33: Male sterility  To be tested in a field trial.  Check presence of pollen on stamen: if pollen on stamen is present then male sterility is absent; if pollen on stamen is absent then male steility is present.   |  |  | | --- | --- | | wordml://101.png | wordml://102.png | | 1 | 9 | | absent | present | | | |
|  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  |  | | --- | --- | | 9. | Literature | | |  |  |  | | --- | | Shogakukan, 1991: The Grand Dictionary of Horticuluture. pp.560-563  Tsunoda, S., Hinata, K., and Gommez-Campo, C., 1980: Brassica Crops and Wild Allies - Biology and Breeding. Japan Scientific Press, Tokyo | | |

|  |  |  |
| --- | --- | --- |
| |  |  | | --- | --- | | 10. | Technical Questionnaire | |
|  |
| |  |  |  | | --- | --- | --- | | TECHNICAL QUESTIONNAIRE | Page {x} of {y} | Reference Number: | |
|  |
| |  |  | | --- | --- | |  | 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 | | | | |  |  |  |  |  | |  | |  | | --- | | 1.1.1 | | Botanical name | |  | | --- | | *Brassica rapa* L. subsp. *pekinensis* (Lour.) Kitam. | | |  | | --- | | [  ] | | |  |  |  |  |  | |  | |  | | --- | | 1.1.2 | | Common name | |  | | --- | | Chinese Cabbage | |  | |  |  |  | |  | | --- | |  | |  | |  |  |  |  |  | |  | |  | | --- | | 1.2.1 | | Botanical name | |  | | --- | | hybrids between *Brassica rapa* L. Emend. Metzg. ssp. *pekinensis* (Lour.) Hanelt and *Brassica rapa* L. Emend. Metzg. ssp. *chinensis* (L.) Hanelt | | |  | | --- | | [  ] | | |  |  |  |  |  | |  | |  | | --- | | 1.2.2 | | Common name | |  | | --- | |  | |  | |  |  |  | |  | | --- | |  | |  | |  |  |  |  |  | |  | |  | | --- | | 1.3.1 | | Botanical name | |  | | --- | | hybrids between *Brassica rapa* L. Emend. Metzg. ssp. *pekinensis* (Lour.) Hanelt and *Brassica rapa* L. var. *rapa* (L.) Thell. | | |  | | --- | | [  ] | | |  |  |  |  |  | |  | |  | | --- | | 1.3.2 | | Common name | |  | | --- | |  | |  | |  |  |  | |  | | --- | |  | |  | |  |  |  |  |  | |  | |  | | --- | | 1.4.1 | | Botanical name | |  | | --- | | *Brassica* ×*turicensis* O. E. Schulz & Thell. | | |  | | --- | | [  ] | | |  |  |  |  |  | |  | |  | | --- | | 1.4.2 | | Common name | |  | | --- | |  | |  | |  |  |  | |  | | --- | |  | |  | |  |  |  |  |  | |

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

|  |  |  |  |
| --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | TECHNICAL QUESTIONNAIRE | Page {x} of {y} | Reference Number: | |
|  |
| |  |  |  | | --- | --- | --- | |  |  |  | |  | 4.2 | Method of propagating the variety | |  | |  |  |  | | --- | --- | --- | | |  | | --- | | 4.2.1 | | |  | | --- | | Seed-propagated varieties | |  | | |  | | --- | | (a) | | |  | | --- | | Cross-pollination | | [ ] | | |  | | --- | | (i) | | |  | | --- | | Population | | [ ] | | |  | | --- | | (ii) | | |  | | --- | | Synthetic variety | | [ ] | | |  | | --- | | (i) | | |  | | --- | | Single hybrid | | [ ] | | |  | | --- | | (b) | | |  | | --- | | Hybrid | | [ ] | | |  | | --- | | (ii) | | |  | | --- | | Three-way hybrid | | [ ] | | |  | | --- | | (iii) | | |  | | --- | | Double hybrid | | [ ] | | |  | | --- | | (c) | | |  | | --- | |  | | [ ] | | |  | | --- | | (d) | | |  | | --- | | Other (please provide details) | | [ ] | |  |  |  | |  |  |  | |  |  |  | | |  | | --- | | 4.2.2 | | Other (Please provide details) | [ ] | |  |  |  | |  |  |  | |  |  |  | | | |  | |  |  | | --- | --- | | |  | | --- | | In the case of hybrid varieties the production scheme for the hybrid should be provided on a separate sheet.  This should provide details of all the lines required for propagating the hybrid, e.g.    *Single Hybrid (SH)*                   (…female parent…)  x  (…male parent…)    *Three-Way Hybrid (3WH)*                   (…female line…)  x  (…male line…)                              => single hybrid used as female parent  x  (…male parent…)    and should identify in particular:         (a)      any male sterile lines         (b)      maintenance system of male sterile lines. | | | | |

|  |  |  |  |
| --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | TECHNICAL QUESTIONNAIRE | Page {x} of {y} | Reference Number: | |
|  |
| |  |  |  |  | | --- | --- | --- | --- | | 5. | Characteristics of the variety to be indicated (the number in brackets refers to the corresponding characteristic in Test Guidelines; please mark the note which best corresponds). | | | |  |  |  |  | |

|  | Characteristics | Example Varieties | Note |
| --- | --- | --- | --- |
|  |  |  |  |
| |  | | --- | | **5.1** |  |  | | --- | | **(2)** | | |  | | --- | | **Plant: height** | |  |  |
|  | |  | | --- | | very short | | |  | | --- | |  | | |  | | --- | | 1 [   ] | |
|  | |  | | --- | | very short to short | | |  | | --- | |  | | |  | | --- | | 2 [   ] | |
|  | |  | | --- | | short | | |  | | --- | | Natsuki, TheHan1ho | | |  | | --- | | 3 [   ] | |
|  | |  | | --- | | short to medium | | |  | | --- | |  | | |  | | --- | | 4 [   ] | |
|  | |  | | --- | | medium | | |  | | --- | | Bilko, Daetong, Muso | | |  | | --- | | 5 [   ] | |
|  | |  | | --- | | medium to tall | | |  | | --- | |  | | |  | | --- | | 6 [   ] | |
|  | |  | | --- | | tall | | |  | | --- | | Monument, Shousai, Wonkyo20036ho | | |  | | --- | | 7 [   ] | |
|  | |  | | --- | | tall to very tall | | |  | | --- | |  | | |  | | --- | | 8 [   ] | |
|  | |  | | --- | | very tall | | |  | | --- | |  | | |  | | --- | | 9 [   ] | |
|  |  |  |  |
|  |  |  |  |
| |  | | --- | | **5.2** |  |  | | --- | | **(24)** | | |  | | --- | | **Head: shape in longitudinal section** | |  |  |
|  | |  | | --- | | circular | | |  | | --- | | Kenshin | | |  | | --- | | 1 [   ] | |
|  | |  | | --- | | elliptic | | |  | | --- | | Hayamidori, TheHan1ho | | |  | | --- | | 2 [   ] | |
|  | |  | | --- | | ovate | | |  | | --- | | Daetong, Shinjyu | | |  | | --- | | 3 [   ] | |
|  | |  | | --- | | obovate | | |  | | --- | | Gorki, Hamamidori | | |  | | --- | | 4 [   ] | |
|  | |  | | --- | | oblong | | |  | | --- | | Chushu, Golden boy, Hanko | | |  | | --- | | 5 [   ] | |
|  | |  | | --- | | narrow oblong | | |  | | --- | | Granaat, Jinhongssam, Shousai | | |  | | --- | | 6 [   ] | |
|  |  |  |  |
|  |  |  |  |
| |  | | --- | | **5.3** |  |  | | --- | | **(25)** | | |  | | --- | | **Head: degree of closing of leaves** | |  |  |
|  | |  | | --- | | open | | |  | | --- | | Jinhongssam | | |  | | --- | | 1 [   ] | |
|  | |  | | --- | | open to half-open | | |  | | --- | |  | | |  | | --- | | 2 [   ] | |
|  | |  | | --- | | half-open | | |  | | --- | | Daetong, Spectrum | | |  | | --- | | 3 [   ] | |
|  | |  | | --- | | half-open to closed | | |  | | --- | |  | | |  | | --- | | 4 [   ] | |
|  | |  | | --- | | closed | | |  | | --- | | Golden boy, Kinap, Muso | | |  | | --- | | 5 [   ] | |
|  |  |  |  |
|  |  |  |  |
| |  | | --- | | **5.4** |  |  | | --- | | **(32)** | | |  | | --- | | **Time of harvest maturity** | |  |  |
|  | |  | | --- | | very early | | |  | | --- | | Kenshin | | |  | | --- | | 1 [   ] | |
|  | |  | | --- | | very early to early | | |  | | --- | |  | | |  | | --- | | 2 [   ] | |
|  | |  | | --- | | early | | |  | | --- | | Blues, RCC65, Sprinkin | | |  | | --- | | 3 [   ] | |
|  | |  | | --- | | early to medium | | |  | | --- | |  | | |  | | --- | | 4 [   ] | |
|  | |  | | --- | | medium | | |  | | --- | | Enduro, Muso, Suho | | |  | | --- | | 5 [   ] | |
|  | |  | | --- | | medium to late | | |  | | --- | |  | | |  | | --- | | 6 [   ] | |
|  | |  | | --- | | late | | |  | | --- | | Chusyu, Jindaebak, Parkin, Red Dragon | | |  | | --- | | 7 [   ] | |
|  | |  | | --- | | late to very late | | |  | | --- | |  | | |  | | --- | | 8 [   ] | |
|  | |  | | --- | | very late | | |  | | --- | |  | | |  | | --- | | 9 [   ] | |
|  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | TECHNICAL QUESTIONNAIRE | Page {x} of {y} | Reference Number: | |
|  |
| |  |  | | --- | --- | | 6. | Similar varieties and differences from these varieties | | |  | | --- | | *Please use the following table and box for comments to provide information on how your candidate variety differs from the variety (or varieties) which, to the best of your knowledge, is (or are) most similar. This information may help the examination authority to conduct its examination of distinctness in a more efficient way.* | | | | |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | | Denomination(s) of variety(ies) similar to your candidate variety | | |  | | --- | | Characteristic(s) in which your candidate variety differs from the similar variety(ies) | | |  | | --- | | Describe the expression of the characteristic(s) for the **similar** variety(ies) | | |  | | --- | | Describe the expression of the characteristic(s) for **your** candidate variety | | | | | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | *Example* | |  | | --- | | *Head : degree of closing of leaves* | | |  | | --- | | *half-open* | | |  | | --- | | *closed* | | |  |  |  |  | |  |  |  |  | |  |  |  |  | | | |  | Comments: | |

|  |  |  |  |
| --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | TECHNICAL QUESTIONNAIRE | Page {x} of {y} | Reference Number: | |
|  |
| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  | | --- | | #7. | | Additional information which may help in the examination of the variety | | | | |  |  |  | | | | 7.1 | In addition to the information provided in sections 5 and 6, are there any additional characteristics which may help to distinguish the variety? | | | | |  | Yes | [ ] | No | [ ] | |  | (If yes, please provide details) | | | | | 7.2 | Are there any special conditions for growing the variety or conducting the examination? | | | | |  | Yes | [ ] | No | [ ] | |  | (If yes, please provide details) | | | | | 7.3 | Other information | | | | |  |  |  |  |  | | 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.] | | | | | |  |  |  |  |  | |

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