

### **Simplified standard protocol**

|                                                             |                                                                                                                                  |          |
|-------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|----------|
| Examination office                                          | Naktuinbouw                                                                                                                      |          |
| Reference of the protocol                                   | NL/MZT/1                                                                                                                         |          |
| Date of preparation of the protocol                         | 02/07/2020                                                                                                                       |          |
| Date of entry into force of the protocol                    | 01/04/2019                                                                                                                       |          |
| Botanical taxon:                                            | Brassica rapa L. subsp. nipposinica (L.H. Bailey) Hanelt x Brassica rapa L. subsp. narinosa (L.H. Bailey) Hanelt                 |          |
| Common Name (when known):                                   |                                                                                                                                  |          |
| Way of propagation of the plants to be examined             | Self or cross pollinated seed propagated <input checked="" type="checkbox"/><br>Vegetatively propagated <input type="checkbox"/> |          |
| Number of growing cycles:                                   | 1 <input type="checkbox"/><br>2 <input checked="" type="checkbox"/><br>Other <input type="checkbox"/> specify                    |          |
| List of grouping characteristics                            | Yes <input checked="" type="checkbox"/> if yes put as annex I<br>No <input type="checkbox"/>                                     |          |
| Minimum number of plants in trial                           | Vegetative:                                                                                                                      | Seed:60  |
| Minimum number of plants observed by measuring or counting: | Vegetative:                                                                                                                      | Seed: 40 |
| Give description of when observations should take place     | See growth stages at characteristics                                                                                             |          |

Uniformity:

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:

For the assessment of uniformity of open-pollinated and hybrid varieties relative uniformity standards should be applied.

|                                                             |                                                                                       |
|-------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Table of characteristics                                    | Present <input checked="" type="checkbox"/><br>Not available <input type="checkbox"/> |
| Literature<br>(when present, please annex to this document) | Present <input checked="" type="checkbox"/><br>Absent <input type="checkbox"/>        |

### Annex I: Grouping characteristics

- (a) Ploidy (characteristic 1)
- (b) Leaf: type (characteristic 5)
- (c) Root: color of skin above soil (characteristic 18)
- (d) Root: color of flesh (characteristic 21)
- (e) Root: shape in longitudinal section (characteristic 24)

### Annex II: Table of characteristics

**B. rapa L. subsp. nipposinica (L.H. Bailey) Hanelt x B. rapa L. subsp. narinosa (L.H. Bailey) Hanelt (NL/MZT/1)**

| Stage <sup>1)</sup><br>Stade <sup>1)</sup><br>Stadium<br><sup>1)</sup><br>Estadio<br><sup>1)</sup> | English                           | français                                      | deutsch                                   | español                              | Example Varieties<br>Exemples<br>Beispielssorten<br>Variedades ejemplo | Note<br>/<br>Nota |
|----------------------------------------------------------------------------------------------------|-----------------------------------|-----------------------------------------------|-------------------------------------------|--------------------------------------|------------------------------------------------------------------------|-------------------|
| <b>1. 00<br/>(*)</b>                                                                               | <b>Ploidy</b>                     | <b>Ploïdie</b>                                | <b>Ploidie</b>                            | <b>Ploidía</b>                       |                                                                        |                   |
|                                                                                                    | diploid                           | diploïde                                      | diploid                                   | diploide                             |                                                                        | 2                 |
|                                                                                                    | tetraploid                        | tétraploïde                                   | tetraploid                                | tetraploide                          |                                                                        | 4                 |
| <b>2. 100-130</b>                                                                                  | <b>Leaf: attitude</b>             | <b>Feuille: port</b>                          | <b>Blatt: Stellung</b>                    | <b>Hoja: porte</b>                   |                                                                        |                   |
|                                                                                                    | erect                             | dressé                                        | aufrecht                                  | erecto                               |                                                                        | 1                 |
|                                                                                                    | semi-erect                        | demi-dressé                                   | halbaufrecht                              | semierecto                           |                                                                        | 3                 |
|                                                                                                    | horizontal                        | horizontal                                    | waagerecht                                | horizontal                           |                                                                        | 5                 |
| <b>3. 100-130<br/>(+)</b>                                                                          | <b>Leaf: reflexing<br/>of top</b> | <b>Feuille:<br/>enroulement du<br/>sommet</b> | <b>Blatt:<br/>Umbiegen der<br/>Spitze</b> | <b>Hoja: curvatura<br/>del ápice</b> |                                                                        |                   |
|                                                                                                    | absent or very<br>weak            | nul ou très faible                            | fehlend oder<br>sehr gering               | ausente o muy<br>débil               |                                                                        | 1                 |
|                                                                                                    | weak                              | faible                                        | gering                                    | débil                                |                                                                        | 3                 |
|                                                                                                    | medium                            | moyen                                         | mittel                                    | media                                |                                                                        | 5                 |
|                                                                                                    | strong                            | fort                                          | stark                                     | fuerte                               |                                                                        | 7                 |
|                                                                                                    | very strong                       | très fort                                     | sehr stark                                | muy fuerte                           |                                                                        | 9                 |

| Stage <sup>1)</sup><br>Stade <sup>1)</sup><br>Stadium<br><sup>1)</sup><br>Estadio<br><sup>1)</sup> | English                                                                              | français                                                                                                     | deutsch                                                                                           | español                                                                                                         | Example Varieties<br>Exemples<br>Beispielssorten<br>Variedades ejemplo | Note<br>/<br>Nota |
|----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|-------------------|
| <b>4.</b> 100-130<br>(*)                                                                           | <b>Leaf:<br/>green color</b>                                                         | <b>Feuille:<br/>couleur verte</b>                                                                            | <b>Blatt:<br/>Grünfärbung</b>                                                                     | <b>Hoja:<br/>color verde</b>                                                                                    |                                                                        |                   |
|                                                                                                    | 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                 |
| <b>5.</b> 100-130<br>(*)<br>(+)                                                                    | <b>Leaf: type</b>                                                                    | <b>Feuille: type</b>                                                                                         | <b>Blatt: Lappung</b>                                                                             | <b>Hoja: tipo</b>                                                                                               |                                                                        |                   |
|                                                                                                    | entire                                                                               | entière                                                                                                      | fehlend                                                                                           | entera                                                                                                          |                                                                        | 1                 |
|                                                                                                    | lobed                                                                                | lobée                                                                                                        | vorhanden                                                                                         | lobulada                                                                                                        |                                                                        | 2                 |
| <b>6.</b> 100-130<br>(+)                                                                           | <b><u>Lobed-leaf varieties only:</u><br/>Leaf: number of lobes</b>                   | <b><u>Uniquement variétés à feuilles lobées:</u><br/>Feuille: nombre de lobes</b>                            | <b><u>Nur bei gelappten Sorten:</u> Blatt: Anzahl Lappen</b>                                      | <b><u>Sólo para variedades de hoja lobulada:</u><br/>Hoja: número de lóbulos</b>                                |                                                                        |                   |
|                                                                                                    | few                                                                                  | petit                                                                                                        | gering                                                                                            | bajo                                                                                                            |                                                                        | 3                 |
|                                                                                                    | medium                                                                               | moyen                                                                                                        | mittel                                                                                            | medio                                                                                                           |                                                                        | 5                 |
|                                                                                                    | many                                                                                 | grand                                                                                                        | groß                                                                                              | alto                                                                                                            |                                                                        | 7                 |
| <b>7.</b> 100-130<br>(+)                                                                           | <b><u>Entire-leaf varieties only:</u><br/>Leaf: depth of incisions of blade base</b> | <b><u>Uniquement variétés à feuilles entières:</u> Feuille : profondeur des incisions à la base du limbe</b> | <b><u>Nur bei nicht gelappten Sorten:</u> Blatt: Tiefe der Einschnitte der Blattspreitenbasis</b> | <b><u>Sólo para variedades de hoja entera:</u><br/>Hoja: profundidad de las incisiones en la base del limbo</b> |                                                                        |                   |
|                                                                                                    | very shallow                                                                         | très peu profondes                                                                                           | sehr gering                                                                                       | muy poco profundas                                                                                              |                                                                        | 1                 |
|                                                                                                    | shallow                                                                              | peu profondes                                                                                                | gering                                                                                            | poco profundas                                                                                                  |                                                                        | 3                 |

| Stage <sup>1)</sup><br>Stade <sup>1)</sup><br>Stadium<br><sup>1)</sup><br>Estadio<br><sup>1)</sup> | English                           | français                           | deutsch                          | español                           | Example Varieties<br>Exemples<br>Beispielssorten<br>Variedades ejemplo | Note<br>/<br>Nota |
|----------------------------------------------------------------------------------------------------|-----------------------------------|------------------------------------|----------------------------------|-----------------------------------|------------------------------------------------------------------------|-------------------|
|                                                                                                    | medium                            | moyennes                           | mittel                           | medias                            |                                                                        | 5                 |
|                                                                                                    | deep                              | profondes                          | tief                             | profundas                         |                                                                        | 7                 |
|                                                                                                    | very deep                         | très profondes                     | sehr tief                        | muy profundas                     |                                                                        | 9                 |
| <b>8. 100-130</b>                                                                                  | <b>Leaf: undulation of margin</b> | <b>Feuille: ondulation du bord</b> | <b>Blatt: Wellung des Randes</b> | <b>Hoja: ondulación del borde</b> |                                                                        |                   |
|                                                                                                    | absent or very weak               | nulle ou très faible               | fehlend oder sehr gering         | ausente o muy débil               |                                                                        | 1                 |
|                                                                                                    | weak                              | faible                             | gering                           | débil                             |                                                                        | 3                 |
|                                                                                                    | medium                            | moyenne                            | mittel                           | media                             |                                                                        | 5                 |
|                                                                                                    | strong                            | forte                              | stark                            | fuerte                            |                                                                        | 7                 |
|                                                                                                    | very strong                       | très forte                         | sehr stark                       | muy fuerte                        |                                                                        | 9                 |
| <b>9. 100-130 (+)</b>                                                                              | <b>Leaf: dentation of margin</b>  | <b>Feuille: denture du bord</b>    | <b>Blatt: Zähnung des Randes</b> | <b>Hoja: dentado del borde</b>    |                                                                        |                   |
|                                                                                                    | absent or very weak               | nulle ou très faible               | fehlend oder sehr gering         | ausente o muy débil               |                                                                        | 1                 |
|                                                                                                    | weak                              | faible                             | gering                           | débil                             |                                                                        | 3                 |
|                                                                                                    | medium                            | moyenne                            | mittel                           | medio                             |                                                                        | 5                 |
|                                                                                                    | strong                            | forte                              | stark                            | fuerte                            |                                                                        | 7                 |
|                                                                                                    | very strong                       | très forte                         | sehr stark                       | muy fuerte                        |                                                                        | 9                 |
| <b>10. 100-130 (*) (+)</b>                                                                         | <b>Leaf: length</b>               | <b>Feuille: longueur</b>           | <b>Blatt: Länge</b>              | <b>Hoja: longitud</b>             |                                                                        |                   |
|                                                                                                    | short                             | courte                             | kurz                             | corta                             |                                                                        | 3                 |
|                                                                                                    | medium                            | moyenne                            | mittel                           | media                             |                                                                        | 5                 |
|                                                                                                    | long                              | longue                             | lang                             | larga                             |                                                                        | 7                 |

| Stage <sup>1)</sup><br>Stade <sup>1)</sup><br>Stadium<br><sup>1)</sup><br>Estadio<br><sup>1)</sup> | English                                                                    | français                                                                                    | deutsch                                                              | español                                                                                     | Example Varieties<br>Exemples<br>Beispielssorten<br>Variedades ejemplo | Note<br>/<br>Nota |
|----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|----------------------------------------------------------------------|---------------------------------------------------------------------------------------------|------------------------------------------------------------------------|-------------------|
| <b>11. 100-130</b>                                                                                 | <b>Leaf: width</b>                                                         | <b>Feuille: largeur</b>                                                                     | <b>Blatt: Breite</b>                                                 | <b>Hoja: anchura</b>                                                                        |                                                                        |                   |
| <b>(+)</b>                                                                                         |                                                                            |                                                                                             |                                                                      |                                                                                             |                                                                        |                   |
|                                                                                                    | narrow                                                                     | étroite                                                                                     | schmal                                                               | estrecha                                                                                    |                                                                        | 3                 |
|                                                                                                    | medium                                                                     | moyenne                                                                                     | mittel                                                               | media                                                                                       |                                                                        | 5                 |
|                                                                                                    | broad                                                                      | large                                                                                       | breit                                                                | ancha                                                                                       |                                                                        | 7                 |
| <b>12. 100-130</b>                                                                                 | <b><u>Lobed-leaf varieties only:</u><br/>Leaf: length of terminal lobe</b> | <b><u>Uniquement variétés à feuilles lobées:</u><br/>Feuille: longueur du lobe terminal</b> | <b><u>Nur bei gelappten Sorten:</u> Blatt: Länge des Endlappens</b>  | <b><u>Sólo para variedades de hoja lobulada:</u><br/>Hoja: longitud del lóbulo terminal</b> |                                                                        |                   |
|                                                                                                    | short                                                                      | court                                                                                       | kurz                                                                 | pequeña                                                                                     |                                                                        | 3                 |
|                                                                                                    | medium                                                                     | moyen                                                                                       | mittel                                                               | media                                                                                       |                                                                        | 5                 |
|                                                                                                    | long                                                                       | long                                                                                        | lang                                                                 | grande                                                                                      |                                                                        | 7                 |
| <b>13. 100-130</b>                                                                                 | <b><u>Lobed-leaf varieties only:</u><br/>Leaf: width of terminal lobe</b>  | <b><u>Uniquement variétés à feuilles lobées:</u><br/>Feuille: largeur du lobe terminal</b>  | <b><u>Nur bei gelappten Sorten:</u> Blatt: Breite des Endlappens</b> | <b><u>Sólo para variedades de hoja lobulada:</u><br/>Hoja: anchura del lóbulo terminal</b>  |                                                                        |                   |
|                                                                                                    | narrow                                                                     | étroit                                                                                      | schmal                                                               | estrecha                                                                                    |                                                                        | 3                 |
|                                                                                                    | medium                                                                     | moyen                                                                                       | mittel                                                               | media                                                                                       |                                                                        | 5                 |
|                                                                                                    | broad                                                                      | large                                                                                       | breit                                                                | ancha                                                                                       |                                                                        | 7                 |

| Stage <sup>1)</sup><br>Stade <sup>1)</sup><br>Stadium<br><sup>1)</sup><br>Estadio<br><sup>1)</sup> | English                                     | français                                               | deutsch                                       | español                                        | Example Varieties<br>Exemples<br>Beispielssorten<br>Variedades ejemplo | Note<br>/<br>Nota |
|----------------------------------------------------------------------------------------------------|---------------------------------------------|--------------------------------------------------------|-----------------------------------------------|------------------------------------------------|------------------------------------------------------------------------|-------------------|
| <b>14. 100-130</b>                                                                                 | <b>Leaf: hairiness<br/>of upper side</b>    | <b>Feuille: pilosité<br/>de la face<br/>supérieure</b> | <b>Blatt:<br/>Behaarung der<br/>Oberseite</b> | <b>Hoja:<br/>vellosidad del<br/>haz</b>        |                                                                        |                   |
|                                                                                                    | absent or very<br>weak                      | nulle ou très<br>faible                                | fehlend oder<br>sehr gering                   | ausente o muy<br>débil                         |                                                                        | 1                 |
|                                                                                                    | weak                                        | faible                                                 | gering                                        | débil                                          |                                                                        | 3                 |
|                                                                                                    | medium                                      | moyenne                                                | mittel                                        | media                                          |                                                                        | 5                 |
|                                                                                                    | strong                                      | forte                                                  | stark                                         | fuerte                                         |                                                                        | 7                 |
|                                                                                                    | very strong                                 | très forte                                             | sehr stark                                    | muy fuerte                                     |                                                                        | 9                 |
| <b>15. 100-130</b>                                                                                 | <b>Leaf:<br/>anthocyanin<br/>coloration</b> | <b>Feuille:<br/>pigmentation<br/>anthocyanique</b>     | <b>Blatt:<br/>Anthocyanfärb<br/>ung</b>       | <b>Hoja:<br/>pigmentación<br/>antociánica</b>  |                                                                        |                   |
|                                                                                                    | absent or very<br>weak                      | nulle ou très<br>faible                                | fehlend oder<br>sehr gering                   | ausente o muy<br>débil                         |                                                                        | 1                 |
|                                                                                                    | weak                                        | faible                                                 | gering                                        | débil                                          |                                                                        | 3                 |
|                                                                                                    | medium                                      | moyenne                                                | mittel                                        | media                                          |                                                                        | 5                 |
|                                                                                                    | strong                                      | forte                                                  | stark                                         | fuerte                                         |                                                                        | 7                 |
|                                                                                                    | very strong                                 | très forte                                             | sehr stark                                    | muy fuerte                                     |                                                                        | 9                 |
| <b>16. 260-290<br/>(*)<br/>(+)</b>                                                                 | <b>Root: position<br/>in soil</b>           | <b>Racine:<br/>position dans le<br/>sol</b>            | <b>Rübe: Sitz im<br/>Boden</b>                | <b>Raiz: posición<br/>dentro del<br/>suelo</b> |                                                                        |                   |
|                                                                                                    | very shallow                                | très peu<br>profonde                                   | sehr flach                                    | muy poco<br>profunda                           |                                                                        | 1                 |
|                                                                                                    | shallow                                     | peu profonde                                           | flach                                         | poco profunda                                  |                                                                        | 3                 |
|                                                                                                    | medium                                      | moyenne                                                | mittel                                        | media                                          |                                                                        | 5                 |
|                                                                                                    | deep                                        | profonde                                               | tief                                          | profunda                                       |                                                                        | 7                 |
|                                                                                                    | very deep                                   | très profonde                                          | sehr tief                                     | muy profunda                                   |                                                                        | 9                 |

| Stage <sup>1)</sup><br>Stade <sup>1)</sup><br>Stadium<br><sup>1)</sup><br>Estadio<br><sup>1)</sup> | English                                                         | français                                                                                          | deutsch                                                                    | español                                                                  | Example Varieties<br>Exemples<br>Beispielssorten<br>Variedades ejemplo | Note<br>/<br>Nota |
|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|---------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|--------------------------------------------------------------------------|------------------------------------------------------------------------|-------------------|
| <b>17. 280<br/>(*)</b>                                                                             | <b>Root: thick<br/>cork layer<br/>around skin</b>               | <b>Racine: couche<br/>subéreuse sur<br/>l'épiderme</b>                                            | <b>Rübe: Dicke<br/>Korkschicht auf<br/>der Haut</b>                        | <b>Raíz: capa<br/>suberosa sobre<br/>la piel</b>                         |                                                                        |                   |
|                                                                                                    | absent                                                          | absente                                                                                           | fehlend                                                                    | ausente                                                                  |                                                                        | 1                 |
|                                                                                                    | present                                                         | présente                                                                                          | vorhanden                                                                  | presente                                                                 |                                                                        | 9                 |
| <b>18. 240-260<br/>(*)</b>                                                                         | <b>Root: color of<br/>skin above soil</b>                       | <b>Racine: couleur<br/>de l'épiderme<br/>de la partie<br/>hors du sol</b>                         | <b>Rübe: Farbe<br/>der Haut<br/>oberhalb des<br/>Bodens</b>                | <b>Raíz: color de<br/>la epidermis<br/>fuera del suelo</b>               |                                                                        |                   |
|                                                                                                    | white                                                           | blanc                                                                                             | weiß                                                                       | blanco                                                                   |                                                                        | 1                 |
|                                                                                                    | green                                                           | vert                                                                                              | grün                                                                       | verde                                                                    |                                                                        | 2                 |
|                                                                                                    | yellow                                                          | jaune                                                                                             | gelb                                                                       | amarillo                                                                 |                                                                        | 3                 |
|                                                                                                    | orange                                                          | orange                                                                                            | orange                                                                     | naranja                                                                  |                                                                        | 4                 |
|                                                                                                    | bronze                                                          | bronze                                                                                            | bronze                                                                     | bronce                                                                   |                                                                        | 5                 |
|                                                                                                    | scarlet                                                         | écarlate                                                                                          | scharlachrot                                                               | escarlata                                                                |                                                                        | 6                 |
|                                                                                                    | reddish purple                                                  | pourpre<br>rougeâtre                                                                              | rötlichviolett                                                             | púrpura rojizo                                                           |                                                                        | 7                 |
|                                                                                                    | bluish purple                                                   | pourpre bleuâtre                                                                                  | bläulichviolett                                                            | púrpura azulado                                                          |                                                                        | 8                 |
| <b>19. 240-260</b>                                                                                 | <b>Root: intensity<br/>of coloration of<br/>skin above soil</b> | <b>Racine:<br/>intensité de la<br/>couleur de<br/>l'épiderme de la<br/>partie hors du<br/>sol</b> | <b>Rübe: Intensität<br/>der Farbe der<br/>Haut oberhalb<br/>des Bodens</b> | <b>Raíz:<br/>intensidad del<br/>color de la piel<br/>fuera del suelo</b> |                                                                        |                   |
|                                                                                                    | light                                                           | claire                                                                                            | hell                                                                       | claro                                                                    |                                                                        | 3                 |
|                                                                                                    | medium                                                          | moyenne                                                                                           | mittel                                                                     | medio                                                                    |                                                                        | 5                 |
|                                                                                                    | dark                                                            | foncée                                                                                            | dunkel                                                                     | oscuro                                                                   |                                                                        | 7                 |

| Stage <sup>1)</sup><br>Stade <sup>1)</sup><br>Stadium<br><sup>1)</sup><br>Estadio<br><sup>1)</sup> | English                                         | français                                                   | deutsch                                               | español                                                | Example Varieties<br>Exemples<br>Beispielssorten<br>Variedades ejemplo | Note<br>/<br>Nota |
|----------------------------------------------------------------------------------------------------|-------------------------------------------------|------------------------------------------------------------|-------------------------------------------------------|--------------------------------------------------------|------------------------------------------------------------------------|-------------------|
| 20. 240-260                                                                                        | <b>Root: colour of skin below ground</b>        | <b>Racine: couleur de l'épiderme de la partie enterrée</b> | <b>Rübe: Farbe der Haut in der Erde</b>               | <b>Raíz: color de la epidermis dentro del suelo</b>    |                                                                        |                   |
|                                                                                                    | white                                           | blanc                                                      | weiß                                                  | blanco                                                 |                                                                        | 1                 |
|                                                                                                    | yellow                                          | jaune                                                      | gelb                                                  | amarillo                                               |                                                                        | 2                 |
|                                                                                                    | red                                             | rouge                                                      | rot                                                   | rojo                                                   |                                                                        | 3                 |
|                                                                                                    | purple                                          | pourpre                                                    | purpur                                                | púrpura                                                |                                                                        | 4                 |
| 21. 240-280<br>(*)                                                                                 | <b>Root: color of flesh</b>                     | <b>Racine: couleur de la chair</b>                         | <b>Rübe: Farbe des Fleisches</b>                      | <b>Raíz: color de la pulpa</b>                         |                                                                        |                   |
|                                                                                                    | white                                           | blanche                                                    | weiß                                                  | blanco                                                 |                                                                        | 1                 |
|                                                                                                    | yellow                                          | jaune                                                      | gelb                                                  | amarillo                                               |                                                                        | 2                 |
| 22. 240-280                                                                                        | <b>Root: intensity of yellow color of flesh</b> | <b>Racine: intensité de la couleur jaune de la chair</b>   | <b>Rübe: Intensität der Gelbfärbung des Fleisches</b> | <b>Raíz: intensidad del color amarillo de la pulpa</b> |                                                                        |                   |
|                                                                                                    | light                                           | claire                                                     | hell                                                  | claro                                                  |                                                                        | 3                 |
|                                                                                                    | medium                                          | moyenne                                                    | mittel                                                | medio                                                  |                                                                        | 5                 |
|                                                                                                    | dark                                            | foncée                                                     | dunkel                                                | oscuro                                                 |                                                                        | 7                 |
| 23. 240-280                                                                                        | <b>Root: anthocyanin coloration of flesh</b>    | <b>Racine: pigmentation anthocyanique de la chair</b>      | <b>Rübe: Anthocyanfärbung des Fleisches</b>           | <b>Raíz: pigmentación antocianica de la pulpa</b>      |                                                                        |                   |
|                                                                                                    | absent                                          | absente                                                    | fehlend                                               | ausente                                                |                                                                        | 1                 |
|                                                                                                    | present                                         | présente                                                   | vorhanden                                             | presente                                               |                                                                        | 9                 |
| 24. 260-280<br>(*)<br>(+)                                                                          | <b>Root: shape in longitudinal section</b>      | <b>Racine: forme en section longitudinale</b>              | <b>Rübe: Form im Längsschnitt</b>                     | <b>Raíz: forma en sección longitudinal</b>             |                                                                        |                   |
|                                                                                                    | transverse<br>narrow elliptic                   | elliptique<br>transversale<br>étroite                      | quer schmal<br>elliptisch                             | elíptica estrecha<br>transversal                       |                                                                        | 1                 |

| Stage <sup>1)</sup><br>Stade <sup>1)</sup><br>Stadium<br><sup>1)</sup><br>Estadio<br><sup>1)</sup> | English                                 | français                                             | deutsch                                             | español                                       | Example Varieties<br>Exemples<br>Beispielssorten<br>Variedades ejemplo | Note<br>/<br>Nota |
|----------------------------------------------------------------------------------------------------|-----------------------------------------|------------------------------------------------------|-----------------------------------------------------|-----------------------------------------------|------------------------------------------------------------------------|-------------------|
|                                                                                                    | transverse<br>elliptic                  | elliptique<br>transversale                           | quer elliptisch                                     | elíptica<br>transversal                       |                                                                        | 2                 |
|                                                                                                    | circular                                | circulaire                                           | rund                                                | circular                                      |                                                                        | 3                 |
|                                                                                                    | obovate                                 | obovale                                              | verkehrt eiförmig                                   | oboval                                        |                                                                        | 4                 |
|                                                                                                    | square                                  | droite                                               | quadratisch                                         | cuadrada                                      |                                                                        | 5                 |
|                                                                                                    | broad oblong                            | oblongue large                                       | breit rechteckig                                    | oblonga ancha                                 |                                                                        | 6                 |
|                                                                                                    | narrow oblong                           | oblongue étroite                                     | schmal<br>rechteckig                                | oblonga<br>estrecha                           |                                                                        | 7                 |
|                                                                                                    | obtriangular                            | obtriangulaire                                       | verkehrt<br>dreieckig                               | obtriangular                                  |                                                                        | 8                 |
| <b>25. 260-280 (*)</b>                                                                             | <b>Root: length</b>                     | <b>Racine: longueur</b>                              | <b>Rübe: Länge</b>                                  | <b>Raíz: longitud</b>                         |                                                                        |                   |
|                                                                                                    | very short                              | très courte                                          | sehr kurz                                           | muy corta                                     |                                                                        | 1                 |
|                                                                                                    | short                                   | courte                                               | kurz                                                | corta                                         |                                                                        | 3                 |
|                                                                                                    | medium                                  | moyenne                                              | mittel                                              | media                                         |                                                                        | 5                 |
|                                                                                                    | long                                    | longue                                               | lang                                                | larga                                         |                                                                        | 7                 |
|                                                                                                    | very long                               | très longue                                          | sehr lang                                           | muy larga                                     |                                                                        | 9                 |
| <b>26. 260-280 (*)</b>                                                                             | <b>Root: diameter (at widest point)</b> | <b>Racine: diamètre (de la partie la plus large)</b> | <b>Rübe: Durchmesser (an der breitesten Stelle)</b> | <b>Raíz: diámetro (en la parte más ancha)</b> |                                                                        |                   |
|                                                                                                    | small                                   | étroit                                               | klein                                               | pequeña                                       |                                                                        | 3                 |
|                                                                                                    | medium                                  | moyen                                                | mittel                                              | media                                         |                                                                        | 5                 |
|                                                                                                    | large                                   | large                                                | groß                                                | grande                                        |                                                                        | 7                 |

| Stage <sup>1)</sup><br>Stade <sup>1)</sup><br>Stadium<br><sup>1)</sup><br>Estadio<br><sup>1)</sup> | English                               | français                                                    | deutsch                                     | español                                     | Example Varieties<br>Exemples<br>Beispielssorten<br>Variedades ejemplo | Note<br>/<br>Nota |
|----------------------------------------------------------------------------------------------------|---------------------------------------|-------------------------------------------------------------|---------------------------------------------|---------------------------------------------|------------------------------------------------------------------------|-------------------|
| <b>27. 260-280</b><br><b>(*)</b><br><b>(+)</b>                                                     | <b>Root: position of widest point</b> | <b>Racine: position relative de la partie la plus large</b> | <b>Rübe: Position der breitesten Stelle</b> | <b>Raíz: posición de la parte más ancha</b> |                                                                        |                   |
|                                                                                                    | above middle                          | au-dessus du milieu                                         | oberhalb der Mitte                          | encima de la mitad                          |                                                                        | 1                 |
|                                                                                                    | at middle                             | au centre                                                   | in der Mitte                                | en la mitad                                 |                                                                        | 2                 |
|                                                                                                    | below middle                          | dans la partie basse                                        | unterhalb der Mitte                         | debajo de la mitad                          |                                                                        | 3                 |
| <b>28. 260-280</b>                                                                                 | <b>Root: curvature of main axis</b>   | <b>Racine: courbure de l'axe principal</b>                  | <b>Rübe: Biegung der Hauptachse</b>         | <b>Raíz: curvatura del eje principal</b>    |                                                                        |                   |
|                                                                                                    | absent                                | absente                                                     | fehlend                                     | ausente                                     |                                                                        | 1                 |
|                                                                                                    | present                               | présente                                                    | vorhanden                                   | presente                                    |                                                                        | 9                 |
| <b>29. 260-280</b><br><b>(*)</b><br><b>(+)</b>                                                     | <b>Root: shape of top</b>             | <b>Racine: forme du collet</b>                              | <b>Rübe: Form des Kopfes</b>                | <b>Raíz: forma del cuello</b>               |                                                                        |                   |
|                                                                                                    | strongly indented                     | fortement déprimé                                           | stark eingesenkt                            | muy hundido                                 |                                                                        | 1                 |
|                                                                                                    | indented                              | déprimé                                                     | eingesenkt                                  | hundido                                     |                                                                        | 3                 |
|                                                                                                    | flat                                  | plat                                                        | eben                                        | plano                                       |                                                                        | 5                 |
|                                                                                                    | raised                                | protubérant                                                 | vorgewölbt                                  | prominente                                  |                                                                        | 7                 |
|                                                                                                    | strongly raised                       | fortement protubérant                                       | stark vorgewölbt                            | muy prominente                              |                                                                        | 9                 |
| <b>30. 260-280</b><br><b>(*)</b><br><b>(+)</b>                                                     | <b>Root: shape of base</b>            | <b>Racine: forme de la base</b>                             | <b>Rübe: Form der Basis</b>                 | <b>Raíz: forma de la base</b>               |                                                                        |                   |
|                                                                                                    | indented                              | déprimée                                                    | eingesenkt                                  | hundida                                     |                                                                        | 1                 |
|                                                                                                    | truncate                              | tronquée                                                    | gerade                                      | truncada                                    |                                                                        | 3                 |
|                                                                                                    | rounded                               | arrondie                                                    | abgerundet                                  | redondeada                                  |                                                                        | 5                 |

| Stage <sup>1)</sup><br>Stade <sup>1)</sup><br>Stadium<br><sup>1)</sup><br>Estadio<br><sup>1)</sup> | English                                       | français                                                | deutsch                                   | español                                               | Example Varieties<br>Exemples<br>Beispielssorten<br>Variedades ejemplo | Note<br>/<br>Nota |
|----------------------------------------------------------------------------------------------------|-----------------------------------------------|---------------------------------------------------------|-------------------------------------------|-------------------------------------------------------|------------------------------------------------------------------------|-------------------|
|                                                                                                    | obtuse                                        | obtuse                                                  | stumpf                                    | obtusa                                                |                                                                        | 7                 |
|                                                                                                    | pointed                                       | pointue                                                 | spitz                                     | puntiaguda                                            |                                                                        | 9                 |
| <b>31. 220-260</b>                                                                                 | <b>Root: time of<br/>harvest<br/>maturity</b> | <b>Racine: époque<br/>de maturité de<br/>la récolte</b> | <b>Rübe: Zeitpunkt<br/>der Erntereife</b> | <b>Raíz: época de<br/>madurez para<br/>la cosecha</b> |                                                                        |                   |
|                                                                                                    | early                                         | précoce                                                 | früh                                      | precoz                                                |                                                                        | 3                 |
|                                                                                                    | medium                                        | moyenne                                                 | mittel                                    | media                                                 |                                                                        | 5                 |
|                                                                                                    | late                                          | tardive                                                 | spät                                      | tardía                                                |                                                                        | 7                 |

## Key to Growth Stages

- 00 Dry seed
- 1-10 Germination and emergence through soil
  - Seedling growth
  - 12 Elongation of emerging shoot
  - 15 Elongation and opening of cotyledons
  - 20 Cotyledons fully opened
  - 30 Cotyledons fully opened and full development of first true leaf
  - 40 Second leaf fully developed
  - 50 Third leaf fully developed and initial senescence of cotyledons
  - 60 Fourth leaf fully developed and partial senescence of cotyledons
  - 70 Fifth leaf fully developed and advanced senescence/drop of cotyledons
  - Leaf development
  - 80 Sixth leaf fully developed
  - 90 Seventh leaf fully developed; initial senescence of first true leaf in early cultivars
  - 100 Eighth leaf fully developed; 30 % senescence of first true leaf
  - 110 Ninth leaf fully developed; 60% senescence of first true leaf
  - Tenth leaf fully developed; complete senescence and drop of first true leaf
  - 130 Eleventh leaf fully developed.
  - Root development
  - 200 Slight swelling of the root at ground level
  - 220 Development of a small swollen root above ground level
  - 240 Swollen root increasing in size but not fully developed
  - 260 Root fully developed with no cork on skin
  - 270 Root fully developed with 40% cork development on skin
  - 280 Root fully developed with 80 - 100% cork development
  - 290 Root flesh becoming pithy and fibrous
  - 300 Root flesh pithy and fibrous
  - Flowering and seed production on main stem
  - 310 Initial formation and elongation of the flowering stem
  - 330 Elongation of the flowering stem with clear space between leaves
  - 350 First bud formation and further elongation of stem
  - 360 Terminal inflorescence in bud
  - 370 Terminal inflorescence with first open flower
  - 380 Terminal inflorescence partially flowering
  - 400 Terminal inflorescence fully flowering
  - 420 Development of siliqua with elongation of flowering stem
  - 430 Lowest fully developed siliqua green
  - 450 Lowest fully developed siliqua senescing and going brown
  - 475 Lowest fully developed siliqua dry with seed beginning to dry
  - 500 Lowest fully developed siliqua dry with mature dry seed

**Annex III: Literature**

TG/37/10

General Introduction to the Examination of Distinctness, Uniformity and Stability and the Development of Harmonized Descriptions of new Varieties of Plants

<http://www.upov.int/tgp/en/>