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| International Union for the Protection of New Varieties of Plants |  |

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| Technical Committee  Fifty-Ninth Session  Geneva, October 23 and 24, 2023 | TC/59/21  Original: English  Date: September 29, 2023 |

Partial revision of the Test Guidelines for RADISH, BLACK RADISH

Document prepared by an expert from France

Disclaimer: this document does not represent UPOV policies or guidance

The purpose of this document is to present a proposal for a partial revision of the Test Guidelines for Radish, Black Radish (document TG/63/7-TG/64/7 Rev. Corr.).

The Technical Working Party for Vegetables (TWV), at its fifty-seventh session[[1]](#footnote-2), considered a proposal for a partial revision of the Test Guidelines for Radish, black radish (*Raphanus sativus* L. var *sativus; Raphanus sativus* L. var. *niger* (Mill.) S. Kerner) on the basis of documents TG/63/7-TG/64/7 Rev. Corr. and TWV/57/9 “*Partial revision of the Test Guidelines for Radish, Black Radish*” and proposed the following changes (see document TWV/57/26 “*Report*”, paragraph 72):

1. Revision of characteristic and explanation Ad. 1 “Only N-type varieties: Ploidy”

The proposed new wording is presented below. The proposed changes are presented in highlight and underline (insertion) and ~~strikethrough~~ (deletion) in the Annex to this document (in English only).

## Proposed revision of characteristic 1 “Only N-type varieties: Ploidy”

|  |  | English | français | deutsch | español | Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo | Note/ Nota |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1. (\*) (+) | MG  C | Only N-type varieties: Ploidy | Uniquement les variétés de type N : ploïdie | Nur N-Typen: Ploidie | Únicamente variedades tipo-N: Ploidía |  |  |
| **QL** |  | diploid | diploïde | diploid | diploide | April Cross (N), Snowbird (N), | 2 |
|  |  | tetraploid | tétraploïde | tetraploid | tetraploide | Rex (N) | 4 |

## Proposed revision of explanation Ad. 1 “Only N-type varieties: Ploidy”

Ad. 1: Only N-type varieties: ploidy

The ploidy status of the plant can be checked by different methods as:

* determination of the number of chromosomes of the non-thickened root meristem
* length of stomata on the lower side of the cotyledon (tetraploid varieties have more and longer stomata than diploid varieties)
* examination of chloroplasts of the guard cells on the lower side of the cotyledon (the guard cells of tetraploid varieties are bigger and contain more chloroplasts (> 20) than those of diploid varieties (> 10)).
* Flow cytometry (DNA quantification method)

Observations should be made on at least 5 plants.

[Annex follows]

PROPOSED CHANGES PRESENTED IN HIGHLIGHT  
(in English only)

## Proposed revision of characteristic 1 “Only N-type varieties: Ploidy”

|  |  | English | français | deutsch | español | Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo | Note/ Nota |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1. (\*) (+) | MG  C | Only N-type varieties: Ploidy | Uniquement les variétés de type N : ploïdie | Nur N-Typen: Ploidie | Únicamente variedades tipo-N: Ploidía |  |  |
| **QL** |  | diploid | diploïde | diploid | diploide | Halblanger weißer Sommer (N)  April Cross (N), Snowbird (N), | 2 |
|  |  | tetraploid | tétraploïde | tetraploid | tetraploide | Rex (N) | 4 |

## Proposed revision of explanation Ad. 1 “Only N-type varieties: Ploidy”

Ad. 1: Only N-type varieties: ploidy

The ploidy status of the plant can be checked by different methods as ~~determination of the number~~:

* determination of the number of chromosomes of the non-thickened root meristem
* ~~and~~ length of stomata on the lower side of the cotyledon (tetraploid varieties have more and longer stomata than diploid varieties)
* examination of chloroplasts of the guard cells on the lower side of the cotyledon (the guard cells of tetraploid varieties are bigger and contain more chloroplasts (> 20) than those of diploid varieties (> 10)).
* Flow cytometry (DNA quantification method)

~~Another efficient method to determine the ploidy status is the flow cytometry~~.

Observations should be made on at least 5 plants.

[End of Annex and of document]

1. held in Antalya, Türkiye, from May 1 to 5, 2023 [↑](#footnote-ref-2)