

Technical Working Party for Vegetables

TWV/57/9

Fifty-Seventh Session

Antalya, Türkiye, May 1 to 5, 2023

Original: English

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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

1. 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.).
2. The Technical Working Party for Vegetables (TWV), at its fifty-sixth session¹, agreed that the Test Guidelines for Radish, black radish (*Raphanus sativus* L. var *sativus*; *Raphanus sativus* L. var. *niger* (Mill.) S. Kerner) be partially revised for characteristic and explanation Ad. 1 “Only N-type varieties: Ploidy” (see document TWV/56/22 “Report”, Annex II).
3. The proposed changes are presented below in highlight and underline (insertion) and ~~strikethrough~~ (deletion).

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

Current wording

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

Proposed new wording

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

¹ organized by electronic means, from April 18 to 22, 2022

Proposed revision of explanation Ad. 1 “Only N-type varieties: Ploidy”*Current wording*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
- and length of stomata on the lower side of the cotyledon (tetraploid varieties have more and longer stomata than diploid varieties)
- 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).

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

*Proposed new wording*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.

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