

Technical Committee

TC/59/17

**Fifty-Ninth Session
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PARTIAL REVISION OF THE TEST GUIDELINES FOR KOHLRABI

Document prepared by an expert from the Netherlands

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 Kohlrabi (document TG/65/4 Rev.).

2. The Technical Working Party for Vegetables (TWV), at its fifty-seventh session¹, considered a proposal for a partial revision of the Test Guidelines for Kohlrabi (*Brassica oleracea* L. convar. *acephala* (DC.) Alef. var. *gongylodes* L. (*Brassica oleracea* L. *Gongylodes* Group)) on the basis of documents TG/65/4 Rev. and TWV/57/21 “*Partial revision of the Test Guidelines for Kohlrabi*” and proposed the following changes (see document TWV/57/26 “*Report*”, paragraph 67):

- (a) Revision of Characteristic 24 “Male sterility”
- (b) Revision of explanation Ad. 24 “Male sterility”

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

Proposed revision of Characteristic 24 “Male sterility”

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
24. VS/ (*) (+) MS²	Male sterility	Stérilité mâle	Männliche Sterilität	Androesterilidad		
QL³	absent	absente	fehlend	ausente	Expreß Forcer, Lanro	1
	present	présente	vorhanden	presente	Erika, Morre, Oasis	9

¹ held in Antalya, Türkiye, from May 1 to 5, 2023, in hybrid format

² See document TGP/7 “Development of Test Guidelines”, Annex 3 “Guidance Notes (GN) for the TG Template”, GN 25 “Recommendations for conducting the examination” (http://www.upov.int/edocs/tgpdocs/en/tgp_7.pdf)

³ See document TGP/7 “Development of Test Guidelines”, Annex 3 “Guidance Notes (GN) for the TG Template”, GN 20 “Presentation of characteristics: States of expression according to type of expression of a characteristic”, 2. “Qualitative Characteristics” (http://www.upov.int/edocs/tgpdocs/en/tgp_7.pdf)

Proposed revision of explanation Ad. 24 “Male sterility”

Ad. 24: Male sterility

To be tested in a field trial and/or in a DNA marker test⁴.

In the case of a field trial, the type of observation is VS. In the case of a DNA marker test, the type of observation is MS.

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 sterility is present.



male fertile (pollen present)



male sterile (pollen absent)

DNA marker test:

If the CMS marker is not present, the variety is expected to have male fertile flowers. In cases where the CMS marker is present, the variety is expected to have male sterile flowers.

In case the DNA marker test result does not confirm the declaration in the TQ, a field trial should be performed to observe whether the variety has male fertile or male sterile flowers due to another mechanism.

[Annex follows]

⁴ The description of the method to test male sterility for *Brassica* (CMS marker) is covered by a trade secret. The owner of the trade secret, Syngenta Seeds B.V., has given its consent for the use of the CMS marker solely for the purposes of examination of Distinctness, Uniformity and Stability (DUS) and for the development of variety descriptions by UPOV and authorities of UPOV members. Syngenta Seeds B.V. declares that neither UPOV, nor authorities of UPOV members that use the CMS marker for the above purposes will be held accountable for possible (mis)use of the CMS marker by third parties. Please contact Naktuinbouw, Netherlands, to obtain the method and information on the CMS marker for the purposes mentioned above.

PROPOSED CHANGES PRESENTED IN HIGHLIGHT
(in English only)

Proposed revision of Characteristic 24 “Male sterility”

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielsorten/ Variedades ejemplo	Note/ Nota
24.	VG/	Male sterility	Stérilité mâle	Männliche Sterilität	Androesterilidad	
(*)	VS/					
(+)	MS⁵					
QL⁶	absent	absente	fehlend	ausente	Expresß Forcer, Lanro	1
	present	présente	vorhanden	presente	Erika, Morre, Oasis	9

⁵ See document TGP/7 “Development of Test Guidelines”, Annex 3 “Guidance Notes (GN) for the TG Template”, GN 25 “Recommendations for conducting the examination” (http://www.upov.int/edocs/tgpdocs/en/tgp_7.pdf)

⁶ See document TGP/7 “Development of Test Guidelines”, Annex 3 “Guidance Notes (GN) for the TG Template”, GN 20 “Presentation of characteristics: States of expression according to type of expression of a characteristic”, 2. “Qualitative Characteristics” (http://www.upov.int/edocs/tgpdocs/en/tgp_7.pdf)

Proposed revision of explanation Ad. 24 “Male sterility”

Ad. 24: Male sterility

To be tested in a field trial and/or in a DNA marker test⁷.

In the case of a field trial, the type of observation is ~~VC~~ VS. In the case of a DNA marker test, the type of observation is MS.

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 sterility is present.



male fertile (pollen present)



male sterile (pollen absent)

DNA marker test:

~~If the CMS marker is not present, a field trial should be performed to observe whether the variety is male sterile (on another mechanism) or fertile. the variety is expected to have male fertile flowers. In cases where the CMS marker is present, the variety is expected to have male sterile flowers. All varieties declared fertile are to be tested in a field trial.~~

In case the DNA marker test result does not confirm the declaration in the TQ, a field trial should be performed to observe whether the variety has male fertile or male sterile flowers due to another mechanism.

[End of Annex and of document]

⁷ The description of the method to test male sterility for *Brassica* (CMS marker) is covered by a trade secret. The owner of the trade secret, Syngenta Seeds B.V., has given its consent for the use of the CMS marker solely for the purposes of examination of Distinctness, Uniformity and Stability (DUS) and for the development of variety descriptions by UPOV and authorities of UPOV members. Syngenta Seeds B.V. declares that neither UPOV, nor authorities of UPOV members that use the CMS marker for the above purposes will be held accountable for possible (mis)use of the CMS marker by third parties. Please contact Naktuinbouw, Netherlands, to obtain the method and information on the CMS marker for the purposes mentioned above.