



TWV/48/31

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## INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

Geneva

### TECHNICAL WORKING PARTY FOR VEGETABLES

#### Forty-Eighth Session Paestum, Italy, June 23 to 27, 2014

#### PARTIAL REVISION OF THE TEST GUIDELINES FOR BRASSICAS

*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 the proposal for the partial revision of the characteristic “Male sterility” of the following Test Guidelines:

- Cauliflower (*Brassica oleracea* L. convar. *botrytis* (L.) Alef. var. *botrytis* L.) (document TG/45/7)
- Cabbage (*Brassica oleracea* L.) (document TG/48/7)
- Brussels Sprout (*Brassica oleracea* L. var. *gemmifera* DC.) (document TG/54/7)
- Kohlrabi (*Brassica oleracea* L. convar. *acephala* (DC.) Alef. var. *gongylodes* L.; *Brassica oleracea* L. *Gongylodes* Group) (document TG/65/4)
- Curly Kale (*Brassica oleracea* L. var. *sabellica* L.) (document TG/105/4)
- Calabrese, Sprouting Broccoli (*Brassica oleracea* L. convar. *botrytis* (L.) Alef. var. *cymosa* Duch. (including *Brassica oleracea* L. convar. *botrytis* (L.) Alef. var. *italica*)) (document TG/151/4)

2. The TWV, at its forty-seventh session, held in Nagasaki, Japan, from May 20 to 24, 2013, also agreed on the partial revision of the following two Test Guidelines. However, the Leading Expert from the Netherlands advised not to include these documents.

- Swede-Rutabaga (*Brassica napus* L. var. *napobrassica* (L.) Rchb.) (document TG/89/6 Rev.)
- Chinese Cabbage (*Brassica rapa* L. var. *pekinensis* (Lour.) Kitam.) (document TG/105/4)

Proposal to Revise the Explanation of Characteristic 28 “Male sterility” of the Test Guidelines for Cauliflower (*Brassica oleracea* L. convar *botrytis* (L.) Alef. var. *botrytis* L.) (document TG/45/7)

*Current wording:*

Ad 28: Male sterility

Absent	=	>70% fertile plants (open-pollinated varieties or hybrid varieties produced with self-incompatibility systems)
Partial	=	30% to 70% fertile plants (heterozygotic genetic sterility)
Total	=	<30% fertile plants (sterile cytoplasm)

*Proposed new wording:*

Ad 28: Male sterility

To be tested in a field trial and/or in a PCR trial.

Field trial:

Absent	=	>70% fertile plants (open-pollinated varieties or hybrid varieties produced with self-incompatibility systems)
Partial	=	30% to 70% fertile plants (heterozygotic genetic sterility)
Total	=	<30% fertile plants (sterile cytoplasm)

PCR and/or field trial:

All applications declared total male sterile (state 3) on the TQ can be tested in a PCR trial. If the CMS marker appears to be not present, a field trial should be performed to observe whether the application is male sterile (on another mechanism), partial sterile or fertile. All applications declared fertile or partial male sterile are to be tested in a field trial. The method and information on the availability of the marker for the PCR test can be obtained via Naktuinbouw (The Netherlands).

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Proposal to Revise the Explanation of Characteristic 21 “Male sterility” of the Test Guidelines for Cabbage (*Brassica oleracea* L.: *Brassica* (White Cabbage Group); *Brassica* (Savoy Cabbage Group); *Brassica* (Red Cabbage Group)) (document TG/48/7)

*Current wording:*

Ad 35: Male sterility

Check presence of pollen on stamen:

- (a) if pollen on stamen is present than male sterility is absent;
- (b) if pollen on stamen is absent than male sterility is present.

*Proposed new wording:*

Ad 35: Male sterility

To be tested in a field trial and/or in a PCR trial.

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.

PCR and/or field trial:

All applications declared male sterile on the TQ can be tested in a PCR trial. If the CMS marker appears to be not present, a field trial should be performed to observe whether the application is male sterile (on another mechanism) or fertile. All applications declared fertile are to be tested in a field trial. The method and information on the availability of the marker for the PCR test can be obtained via Naktuinbouw (The Netherlands).

Proposal to Revise the Explanation of Characteristic 21 “Male sterility” of the Test Guidelines for Brussels Sprout (*Brassica oleracea* L. var. *gemmifera* DC.) (document TG/54/7)

*Current wording:*

Ad 21: Male sterility

Male sterile varieties have flowers with partially developed stamens; the filament is present but not the anther (pollen sack).

*Proposed new wording:*

Ad 21: Male sterility

To be tested in a field trial and/or in a PCR trial.

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.

PCR and/or field trial:

All applications declared male sterile on the TQ can be tested in a PCR trial. If the CMS marker appears to be not present, a field trial should be performed to observe whether the application is male sterile (on another mechanism) or fertile. All applications declared fertile are to be tested in a field trial. The method and information on the availability of the marker for the PCR test can be obtained via Naktuinbouw (The Netherlands).

Proposal to Revise the Test Guidelines for Kohlrabi (*Brassica oleracea* L. convar. *acephala* (DC.) Alef. var. *gongylodes* L.; *Brassica oleracea* L. *Gongylodes* Group) (document TG/65/4)

The characteristic “Male sterility” is not included in the Test Guidelines for Kohlrabi (document TG/65/4). It is proposed to add this characteristic and an explanation to the Test Guidelines (like in Brussels sprouts and Cabbage):

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

Ad 24: Male sterility

To be tested in a field trial and/or in a PCR trial.

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.

PCR and/or field trial:

All applications declared male sterile on the TQ can be tested in a PCR trial. If the CMS marker appears to be not present, a field trial should be performed to observe whether the application is male sterile (on another mechanism) or fertile. All applications declared fertile are to be tested in a field trial. The method and information on the availability of the marker for the PCR test can be obtained via Naktuinbouw (The Netherlands).

Proposal to add an Explanation to Characteristic 32 “Male sterility” of the Test Guidelines for Calabrese Sprouting Broccoli (*Brassica oleracea* L. convar. *botrytis* (L.) Alef. var. *cymosa* Duch. including *Brassica oleracea* L. convar *botrytis* (L.) Alef. var. *italic*) (document TG/151/4)

*Proposed wording for Ad. 32*

Ad 32: Male sterility

To be tested in a field trial and/or in a PCR trial.

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.

PCR and/or field trial:

All applications declared male sterile on the TQ can be tested in a PCR trial. If the CMS marker appears to be not present, a field trial should be performed to observe whether the application is male sterile (on another mechanism) or fertile. All applications declared fertile are to be tested in a field trial. The method and information on the availability of the marker for the PCR test can be obtained via Naktuinbouw (The Netherlands).

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