UPOV

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PARTIAL REVISION OF THE TEST GUIDELINES FOR MELON

Document prepared by experts 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 Melon (document TG/104/5 Rev.).

2. The Technical Working Party for Vegetables (TWV), at its fifty-second session, held in Beijing, China, from September 17 to 21, 2018, agreed that the Test Guidelines for Melon (document TG/104/5 Rev.) be partially revised for Characteric 75 “Resistance to *Melon necrotic spot virus* (MNSV), E8 strain” (see document TWV/52/20 “Report”, Annex V).

3. The following changes are proposed to Characteristic 75 “Resistance to *Melon necrotic spot virus* (MNSV), E8 strain”:

(a) Introduction of reference to the pathotype 0 for MNSV;
(b) Revision of the explanation Ad. 75 in Chapter 8.2 “Explanations for individual characteristics”.

4. The proposed changes are presented below in highlight and underline (insertion) and ~~strikethrough~~ (deletion).

Proposal to introduce a reference to the pathotype 0 for MNSV

Current wording

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
75. **(+)**	**VG**	**Resistance to *Melon necrotic spot virus* (MNSV) E8 strain**	**Résistance au virus de la criblure du melon (MNSV) Souche E8**	**Resistenz gegen Netzmelonen-nekrosefleckenvirus (MNSV) Pathotyp E8**	**Resistencia al virus del cribado del melón (MNSV) Raza E8**		
QL		absent	absente	fehlend	ausente	Védrantais	1
		present	présente	vorhanden	presente	Cyro, Primal, Virgos, Yellow Fun	9

Proposed new wording

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
75. **(+)**	**VG**	**Resistance to *Melon necrotic spot virus* ~~E8 strain~~** **Pathotype 0 (MNSV: 0)**	**Résistance au virus de la criblure du melon ~~Souche E8~~** **Pathotype 0 (MNSV: 0)**	**Resistenz gegen Netzmelonen-nekrosefleckenvirus (MNSV) ~~Pathotyp E8~~** **Pathotyp 0 (MNSV: 0)**	**Resistencia al virus del cribado del melón (MNSV) ~~Raza E8~~** **Pathotipo 0 (MNSV: 0)**		
QL		absent	absente	fehlend	ausente	Védrantais	1
		present	présente	vorhanden	presente	Cyro, Primal, Virgos, Yellow Fun	9

Proposal to revise the explanation Ad. 75 in Chapter 8.2 “Explanations for individual characteristics”

Current wording

Ad. 75: Resistance to *Melon necrotic spot virus* (MNSV), E8 strain

1.	Pathogen	*Melon necrotic spot virus* (MNSV)
2.	Quarantine status	-
3.	Host species	*Cucumis melo*
4.	Source of inoculum	GEVES (FR)
5.	Isolate	E8 strain
6.	Establishment isolate identity	Védrantais (susceptible) PMR5, VA 435, Virgos (resistant)
7.	Establishment pathogenicity	on susceptible plant
8.	Multiplication inoculum	
8.1	Multiplication medium	living plant
8.2	Multiplication variety	pre-multiplication of the virus on non-wilting variety (Védrantais) prior to testing
8.3	Plant stage at inoculation	10.3
8.4	Inoculation medium	-
8.5	Inoculation method	10.4
8.6	Harvest of inoculum	10.1
8.7	Check of harvested inoculum	symptomatic leaves
8.8	Shelflife/viability inoculum	on susceptible variety
9.	Format of the test	
9.1	Number of plants per genotype	at least 30
9.2	Number of replicates	e.g. 3
9.3	Control varieties	Védrantais (susceptible) Cyro, Primal, Virgos, Yellow Fun (resistant)
9.4	Test design	-
9.5	Test facility	growth chamber
9.6	Temperature	25°C during day and 18°C during night or 22°C constant
9.7	Light	12 h per day
9.8	Season	all seasons
9.9	Special measures	-
10.	Inoculation	
10.1	Preparation inoculum	fresh leaves homogenized in PBS and carborundum
10.2	Quantification inoculum	-
10.3	Plant stage at inoculation	cotyledon expanded or 1st emergent leaf
10.4	Inoculation method	mechanical inoculation by rubbing of cotyledons with inoculum
10.5	First observation	-
10.6	Second observation	-
10.7	Final observations	8-15 days after inoculation
11.	Observations	
11.1	Method	Visual
11.2	Observation scale	
	[1] absent	necrotic lesions on the inoculated organs, possible systemic reaction (depends on condition, and varieties), possible death of plant
	[9] present	no lesions
11.3	Validation of test	on standards
11.4	Off-types	-
12.	Interpretation of data in terms of UPOV characteristic states	QL
13.	Critical control points	-

Proposed new wording

Ad. 75: Resistance to *Melon necrotic spot virus* (MNSV), ~~E8 strain~~ Pathotype 0 (MNSV: 0)

1.	Pathogen	*Melon necrotic spot virus* pathotype 0 (MNSV: 0)
2.	Quarantine status	-
3.	Host species	*Cucumis melo*
4.	Source of inoculum	GEVES[1] (FR)
5.	Isolate	Strain E8
6.	Establishment isolate identity	Védrantais (susceptible) PMR5, VA 435, Virgos (resistant)
7.	Establishment pathogenicity	on susceptible plant
8.	Multiplication inoculum	
8.1	Multiplication medium	living plant
8.2	Multiplication variety	pre-multiplication of the virus on non-wilting variety (Védrantais) prior to testing
8.3	Plant stage at inoculation	10.3
8.4	Inoculation medium	-
8.5	Inoculation method	10.4
8.6	Harvest of inoculum	10.1
8.7	Check of harvested inoculum	symptomatic leaves
8.8	Shelflife/viability inoculum	on susceptible variety
9.	Format of the test	
9.1	Number of plants per genotype	at least 30
9.2	Number of replicates	e.g. 3
9.3	Control varieties	Védrantais (susceptible) Cyro, Primal, Virgos, Yellow Fun, (resistant)
9.4	Test design	add non inoculated plants
9.5	Test facility	growth chamber
9.6	Temperature	25°C during day and 18°C during night or 22°C constant
9.7	Light	12 h per day
9.8	Season	all seasons
9.9	Special measures	-
10.	Inoculation	
10.1	Preparation inoculum	fresh leaves homogenized in PBS and carborundum
10.2	Quantification inoculum	-
10.3	Plant stage at inoculation	cotyledon expanded or 1st emergent leaf
10.4	Inoculation method	mechanical inoculation by rubbing of cotyledons with inoculum
10.5	First observation	-
10.6	Second observation	-
10.7	Final observations	8-15 days after inoculation
11.	Observations	
11.1	Method	Visual
11.2	Observation scale	
	[1] absent	necrotic lesions on the inoculated organs, possible systemic reaction (depends on condition, and varieties), possible death of plant
	[9] present	no lesions
11.3	Validation of test	on standards
11.4	Off-types	-
12.	Interpretation of data in terms of UPOV characteristic states	QL
13.	Critical control points	To check the pathogene identity, Virgos is resistant to MNSV pathotype 0 and susceptible to MNSV pathotype 1.

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