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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

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PARTIAL REVISION OF THE TEST GUIDELINES FOR CUCUMBER (DOCUMENT TG/61/7)

*Document prepared by an expert from Spain**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 Test Guidelines for Cucumber (document TG/61/7).
2. The following changes are proposed:
 - Addition of a new characteristic “Resistance to Cucurbit yellow stunting disorder virus (CYSDV)” after characteristic 50 in Chapter 7 “Table of Characteristics”
 - Addition of a new explanation Ad. 51 to Chapter 8.2 “Explanations for individual characteristics”
3. The Annex to this document contains comments by the subgroup on the first draft of this partial revision.

Proposal to add a New Characteristic “Resistance to Cucurbit yellow stunting disorder virus (CYSDV)” after Characteristic 50 in Chapter 7 “Table of Characteristics”

51. (+)	Resistance to Cucurbit yellow stunting disorder virus (CYSDV)	Résistance au Cucurbit yellow stunting disorder virus (CYSDV)	Resistenz gegen Cucurbit yellow stunting disorder virus (CYSDV)	Resistencia al virus del amarillo del pepino (CYSDV)		
QL	absent	absente	fehlend	ausente	Corona	1
	present	présente	vorhanden	presente	Atalaya, Fortyca	9

Proposal to add a New Explanation Ad. 51 to Chapter 8.2 “Explanations for individual characteristics”Ad. 51: Resistance to Cucurbit yellow stunting disorder virus (CYSDV)

1.	Pathogen	Cucurbit yellow stunting disorder virus
2.	Quarantine status	yes
3.	Host species	<i>Cucumber sativus</i> , <i>Cucumis melo</i> , <i>Cucurbita pepo</i> , <i>Citrullus lanatus</i>
4.	Source of inoculum	CSIC-La Mayora (Spain)
5.	Isolate	CYSDV La Mayora
6.	Establishment isolate identity	-
7.	Establishment pathogenicity	-
8.	Multiplication inoculum	
8.1	Multiplication medium	-
8.2	Multiplication variety	-
8.3	Plant stage at inoculation	-
8.4	Inoculation medium	-
8.5	Inoculation method	-
8.6	Harvest of inoculum	-
8.7	Check of harvested inoculum	-
8.8	Shelflife/viability inoculum	-
9.	Format of the test	
9.1	Number of plants per genotype	20
9.2	Number of replicates	2
9.3	Control varieties	
	Susceptible	(<i>Cucumis sativus</i>) Corona, Burgos, Castro
	Resistant	(<i>Cucumis sativus</i>) Atalaya, Fortyca
9.4	Test design	
9.5	Test facility	Field/greenhouse/plastic tunnel/Climatic chamber with natural disease pressure
9.6	Temperature	-
9.7	Light	-
9.8	Season	-
9.9	Special measures	prevent spread of white-flies. Plants should be covered with a white-fly-proof net in the greenhouse
10.	Inoculation	
10.1	Preparation inoculum	-
10.2	Quantification inoculum	-
10.3	Plant stage at inoculation	2-4 weeks
10.4	Inoculation method	vector (<i>Bemisia</i> white-flies carrying CYSDV)
10.5	First observation	-
10.6	Second observation	-
10.7	Final observations	1-2 months after inoculation
11.	Observations	
11.1	Method	visual
11.2	Observation scale	symptoms: leaf yellowing
11.3	Validation of test	evaluation of variety resistance should be calibrated with results of resistant and susceptible controls
11.4	Off-types	-
12.	Interpretation of data in terms of UPOV characteristic states	
	absent	[1] severe symptoms
	present	[9] no or mild symptoms

13.	Critical control points	In the not recommended case of natural infection in field or greenhouse when the source of inoculum is not controlled, the presence of the virus should be confirmed by PCR or hybridization, because the symptoms may be similar to those caused by other virus.
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[Annex follows]

ANNEX

COMMENTS BY THE SUBGROUP

The first draft was elaborated with the information supplied by two breeding companies. The comments received from the sub-group of interested experts to the first draft were:

NL

Cucurbit Yellow Stunting Disorder Virus should be written as Cucurbit yellow stunting disorder virus.

ES: We accept the proposal. Incorporated to the actual draft

NL

'Spain' is very general as source of inoculum. Could this be more specific? It could be something like: Source: natural infection in Spain (e.g. in test facilities of La Mayora, Málaga).

ES: We accept the proposal. More detailed in the actual draft

ES (Pathologist Cristina Moyano):

I think that the best option is to work in a climatic chamber or green house with white-flies from a virus-free colony exposed only to plants infected with CYSDV. I put in contact with Marisa Guillamon from "La Mayora" and she can supply the white flies. It is important to prevent spread of white flies, plants should be covered with a white-fly-proof net in the greenhouse. In this case visual evaluation of symptoms plants can be used. In case of natural infection in field or greenhouse when the source of inoculum is not controlled, the presence of the virus should be confirmed by PCR or hybridization. Other virus like BPYV or CABYV have similar symptoms.

ES

We accept the proposal. It is incorporated to the actual draft in point 13(critical control points) and 9.9 (special measures)

We propose to delete in point 9.5 the open field with natural disease pressure as optional facility, it is replaced with climatic chamber.

We include CSIC-La Mayora as source of inoculum

[End of Annex and of document]