

Technical Working Party for Vegetables

TWV/57/14

Fifty-Seventh Session
Antalya, Türkiye, May 1 to 5, 2023

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PARTIAL REVISION OF THE TEST GUIDELINES FOR WATERMELON

Document prepared by an expert from the Netherlands

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1. The purpose of this document is to present a proposal for a partial revision of the Test Guidelines for Watermelon (document TG/142/5 Rev.).
2. The Technical Working Party for Vegetables (TWV), at its fifty-sixth session¹, be partially revised (see document TWV/56/22 “Report”, Annex II).
3. The following changes are proposed:
 - (a) Revision of explanation Ad. 1 “Ploidy”
 - (b) Inclusion of characteristics from the Table of Characteristics in the Technical Questionnaire (see documents TWV/56/22 “Report”, paragraphs 102 and 103, and TWP/7/6 “Revision of Test Guidelines”)
4. The proposed changes are presented below in highlight and underline (insertion) and ~~striketrough~~ (deletion).

Proposed revision of explanation Ad. 1 “Ploidy”

Current wording

Ad. 1: Ploidy

Ploidy level may be detected by several methods:

- a. by counting chromosomes of cells under the microscope;
- b. by counting the number chloroplasts of stomatal guard cells using a leaf peel under the microscope;
- c. by flow cytometry.
- d. Triploid varieties show a whitish seed coat without embryo

Proposed new wording

Ad. 1: Ploidy

Ploidy level may be ~~detected~~ assessed by several methods:

- a. by counting chromosomes of cells under the microscope;
- b. by counting the number chloroplasts of stomatal guard cells using a leaf peel under the microscope;
- c. by flow cytometry.
- d. Triploid varieties show a whitish seed coat without embryo

Observation should be made on at least 5 plants.

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

Proposed inclusion of characteristics from the Table of Characteristics in the Technical Questionnaire

5. The TWV is invited to consider the inclusion of the following characteristics in the TQ (characteristics for inclusion indicated in highlight and underline):

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5. Characteristics of the variety to be indicated (the number in brackets refers to the corresponding characteristic in Test Guidelines; please mark the note which best corresponds).

Characteristics	Example Varieties	Note
5.1 Ploidy (1)		
diploid	SP 4, Sugar Baby, Yamato 3	2[]
triploid	Boston, TRIX 313	3[]
tetraploid		4[]
5.2 <u>Leaf blade: degree of lobing</u> (8)		
<u>absent or very weak</u>	<u>Sunshade</u>	<u>1[]</u>
<u>very weak to weak</u>		<u>2[]</u>
<u>weak</u>	<u>Estrella, Karistan</u>	<u>3[]</u>
<u>weak to medium</u>		<u>4[]</u>
<u>medium</u>	<u>Crimson Sweet, Crisby</u>	<u>5[]</u>
<u>medium to strong</u>		<u>6[]</u>
<u>strong</u>	<u>Cadanz</u>	<u>7[]</u>
<u>strong to very strong</u>		<u>8[]</u>
<u>very strong</u>	<u>SP 1</u>	<u>9[]</u>
5.2.3 Fruit: weight (11)		
very low	Monaco, New Hampshire Midget	1[]
very low to low	Mini, Petite Perfection	2[]
low	Angela	3[]
low to medium	Pasion, Sugar Baby	4[]
medium	Boston	5[]
medium to high	Crimson Sweet, Panonnia	6[]
high	Fabiola	7[]
high to very high	Jubilee	8[]
very high	Carolina Cross, Cobb's Gem, Florida Giant	9[]

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Characteristics	Example Varieties	Note
5.3.4 Fruit: shape in longitudinal section (12)		
circular	Camilla, Kanro	1[]
broad elliptic	Fumin, Gray Belle, Yellow Baby, Zorba	2[]
medium elliptic	Congo, Kurobe, Picnic	3[]
narrow elliptic	All Sweet, Charleston Gray	4[]
5.4.5 Fruit: ground color of skin (16)		
yellow	Taiyô	1[]
very light green	Ipanema	2[]
very light green to light green	Napsugar	3[]
light green	Tigre	4[]
light green to medium green	Pepsin	5[]
medium green	Ovation, Talete	6[]
medium green to dark green	Odem, Resistant, Sweet Marvel	7[]
dark green	Sugar Baby	8[]
dark green to very dark green	Augusta, Rocio	9[]
very dark green		10[]
5.6 Fruit: pattern of stripes (18)		
<u>only one colored</u>	<u>Congo</u>	<u>1[]</u>
<u>one colored and veins</u>	<u>Trix Palomar</u>	<u>2[]</u>
<u>one colored, veins and marbled</u>	<u>Boston</u>	<u>3[]</u>
<u>one colored and marbled</u>	<u>Jenny</u>	<u>4[]</u>
<u>two colored, veins and marbled</u>	<u>Crisby</u>	<u>5[]</u>
<u>only veins</u>		<u>6[]</u>

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Characteristics	Example Varieties	Note
5.5 7 (19)		
Fruit: width of stripes		
very narrow	SP 4, Tiny Orchid	1[]
very narrow to narrow		2[]
narrow	Boston	3[]
narrow to medium		4[]
medium	Crimson Sweet	5[]
medium to broad		6[]
broad	Sangria	7[]
broad to very broad		8[]
very broad	All Sweet	9[]
5.8 (20)		
Fruit: main color of stripes		
<u>yellow</u>		1[]
<u>very light green</u>		2[]
<u>light green</u>		3[]
<u>medium green</u>		4[]
<u>dark green</u>		5[]
<u>very dark green</u>		6[]
5.9 (21)		
Fruit: conspicuousness of stripes		
<u>inconspicuous or very weakly conspicuous</u>	<u>Augusta</u>	1[]
<u>weak</u>	<u>Odem</u>	2[]
<u>medium</u>	<u>Trix Palomar</u>	3[]
<u>strong</u>	<u>Jenny</u>	4[]
<u>very strong</u>	<u>A graine rouge à confire à chair verte</u>	5[]
5.6 10 (22)		
Fruit: margin of stripes		
diffuse	Crimson Glory, Crisby	1[]
medium	Crimson Sweet	2[]
sharp	Jenny, Jubilee	3[]

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Characteristics	Example Varieties	Note
5.11 Fruit: thickness of pericarp (27)		
<u>very thin</u>	<u>Bibo, Tiny Orchid, Luciano</u>	1[]
<u>very thin to thin</u>		2[]
<u>thin</u>	<u>À graine rouge à confire à chair verte, Beni-kodama, Jenny, Kahô, Kassai</u>	3[]
<u>thin to medium</u>		4[]
<u>medium</u>	<u>Pannonia, Sugar Baby, Sugar Belle, Yamato 3</u>	5[]
<u>medium to thick</u>		6[]
<u>thick</u>	<u>Charleston Gray, Crimson Sweet, Kurobe, Triple Sweet, Sunrise</u>	7[]
<u>thick to very thick</u>		8[]
<u>very thick</u>	<u>Coles Early, Kholodok</u>	9[]
5.7.12 Fruit: main color of flesh (28)		
white	SP 4, SP 1, Yamato Cream 3	1[]
yellow	Napsugár, Yamato Cream 1	2[]
orange	Kahô, Tendersweet	3[]
pink	Sadul	4[]
pinkish red	Bingo, Crimson Sweet	5[]
red	Asahi Miyako Hybrid, Sugar Baby, Topgun	6[]
dark red	Dixie Lee	7[]
5.13 Only triploid varieties: Seed coat: size (29)		
<u>small</u>	<u>Petite Perfection</u>	2[]
<u>medium</u>	<u>Boston, Valdoria, Sweet Sun</u>	3[]
<u>large</u>	<u>Ortal, Tigre, Pasion</u>	4[]
<u>not applicable</u>		[]

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Characteristics	Example Varieties	Note
5.8 14 <u>Only diploid and tetraploid varieties: Seed: length</u> (31)		
very short	Kudam	1[]
very short to short		2[]
short	Pannonnia, Tabata	3[]
short to medium		4[]
medium	Sugar Baby	5[]
medium to long		6[]
long	Charleston Gray, Kurobe	7[]
long to very long		8[]
very long	Malali, Wanli	9[]
<u>not applicable</u>		<input type="checkbox"/>
5.9 15 <u>Only diploid and tetraploid varieties: Seed: ground color of testa</u> (33)		
white	Sanpaku	1[]
cream	Kurobe	2[]
green	A confire allongée à graine verte, Green Citron	3[]
red	A graine rouge à confire à chair verte, Red Citron	4[]
red brown	Kahô	5[]
brown	Otome, Sugar Baby	6[]
black	Yamato Cream	7[]
<u>not applicable</u>		<input type="checkbox"/>

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Characteristics	Example Varieties	Note
5.16 (36)		
<u>very early</u>		1f <input type="checkbox"/>
<u>very early to early</u>		2f <input type="checkbox"/>
<u>early</u>	<u>Tiny Orchid</u>	3f <input type="checkbox"/>
<u>early to medium</u>		4f <input type="checkbox"/>
<u>medium</u>	<u>Sugar Baby, Yamato 3</u>	5f <input type="checkbox"/>
<u>medium to late</u>		6f <input type="checkbox"/>
<u>late</u>	<u>Kurobe</u>	7f <input type="checkbox"/>
<u>late to very late</u>		8f <input type="checkbox"/>
<u>very late</u>		9f <input type="checkbox"/>
5.17 (37.1)		
<u>absent</u>	<u>Kahô, Sugar Baby</u>	1f <input type="checkbox"/>
<u>present</u>	<u>Calhoun Gray, Charleston Gray</u>	9f <input type="checkbox"/>
<u>not tested</u>		<input type="checkbox"/>
5.18 (37.2)		
<u>absent</u>	<u>Charleston Gray, Kahô, Sugar Baby</u>	1f <input type="checkbox"/>
<u>present</u>	<u>Calhoun Gray</u>	9f <input type="checkbox"/>
<u>not tested</u>		<input type="checkbox"/>
5.19 (37.3)		
<u>absent</u>	<u>Calhoun Gray, Kahô</u>	1f <input type="checkbox"/>
<u>present</u>	<u>PI 296341-FR</u>	9f <input type="checkbox"/>
<u>not tested</u>		<input type="checkbox"/>
5.20 (38.1)		
<u>absent</u>	<u>Black Diamond, Calhoun Gray, Kahô</u>	1f <input type="checkbox"/>
<u>present</u>	<u>Charleston Gray, Congo, Jubilee</u>	9f <input type="checkbox"/>
<u>not tested</u>		<input type="checkbox"/>