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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

Geneva

DRAFT

WATERMELON

UPOV Code: CTRLS_LAN

(*Citrullus lanatus* (Thunb.) Matsum. et Nakai)

GUIDELINES

FOR THE CONDUCT OF TESTS

FOR DISTINCTNESS, UNIFORMITY AND STABILITY

prepared by an expert from the Netherlands

to be considered by the

Technical Working Party for Vegetables at its forty-sixth session,
to be held near the City of Venlo, Netherlands, from June 11 to 15, 2012

Alternative Names:*

Botanical name	*English*	*French*	*German*	*Spanish*
Citrullus lanatus (Thunb.) Matsum. et Nakai, *Citrullus vulgaris* Schrad.	Watermelon	Pastèque	Wassermelone	Sandía

The purpose of these guidelines ("Test Guidelines") is to elaborate the principles contained in the General Introduction (document TG/1/3), and its associated TGP documents, into detailed practical guidance for the harmonized examination of distinctness, uniformity and stability (DUS) and, in particular, to identify appropriate characteristics for the examination of DUS and production of harmonized variety descriptions.

ASSOCIATED DOCUMENTS

These Test Guidelines should be read in conjunction with the General Introduction and its associated TGP documents.

* These names were correct at the time of the introduction of these Test Guidelines but may be revised or updated. [Readers are advised to consult the UPOV Code, which can be found on the UPOV Website (www.upov.int), for the latest information.]

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1. Subject of these Test Guidelines

These Test Guidelines apply to all varieties of *Citrullus lanatus* (Thunb.) Matsum. et Nakai. Varieties belonging to *Citrullus colocynthis* (L.) Schrad. are excluded.

2. Material Required

2.1 The competent authorities decide on the quantity and quality of the plant material required for testing the variety and when and where it is to be delivered. Applicants submitting material from a State other than that in which the testing takes place must ensure that all customs formalities and phytosanitary requirements are complied with.

2.2 The material is to be supplied in the form of seed.

2.3 The minimum quantity of plant material, to be supplied by the applicant, should be:

1,200 seeds.

The seed should meet the minimum requirements for germination, species and analytical purity, health and moisture content, specified by the competent authority.

2.4 The plant material supplied should be visibly healthy, not lacking in vigor, nor affected by any important pest or disease.

2.5 The plant material should not have undergone any treatment which would affect the expression of the characteristics of the variety, unless the competent authorities allow or request such treatment. If it has been treated, full details of the treatment must be given.

3. Method of Examination

3.1 Number of Growing Cycles

The minimum duration of tests should normally be two independent growing cycles.

3.2 Testing Place

Tests are normally conducted at one place. In the case of tests conducted at more than one place, guidance is provided in TGP/9 “Examining Distinctness”.

3.3 Conditions for Conducting the Examination

The tests should be carried out under conditions ensuring satisfactory growth for the expression of the relevant characteristics of the variety and for the conduct of the examination.

3.4 Test Design

3.4.1 Each test should be designed to result in a total of at least 20 plants which should be divided between at least two replicates.

3.4.2 The design of the tests should be such that plants or parts of plants may be removed for measurement or counting without prejudice to the observations which must be made up to the end of the growing cycle.

3.4.3 For pollination and fruit set of triploid varieties it is needed to interplant with diploid varieties in a trial lay out so that the diploid pollenizers will be close to the triploid plants. The minimum percentage of diploid plants should not be less than 30%. When pollinators (e.g. bees, bumblebees) are used a slightly lower percentage of pollenizer may be required.

3.5 Additional Tests

Additional tests, for examining relevant characteristics, may be established.

4. Assessment of Distinctness, Uniformity and Stability

4.1 Distinctness

4.1.1 General Recommendations

It is of particular importance for users of these Test Guidelines to consult the General Introduction prior to making decisions regarding distinctness. However, the following points are provided for elaboration or emphasis in these Test Guidelines.

4.1.2 Consistent Differences

The differences observed between varieties may be so clear that more than one growing cycle is not necessary. In addition, in some circumstances, the influence of the environment is not such that more than a single growing cycle is required to provide assurance that the differences observed between varieties are sufficiently consistent. One means of ensuring that a difference in a characteristic, observed in a growing trial, is sufficiently consistent is to examine the characteristic in at least two independent growing cycles.

4.1.3 Clear Differences

Determining whether a difference between two varieties is clear depends on many factors, and should consider, in particular, the type of expression of the characteristic being examined, i.e. whether it is expressed in a qualitative, quantitative, or pseudo-qualitative manner. Therefore, it is important that users of these Test Guidelines are familiar with the recommendations contained in the General Introduction prior to making decisions regarding distinctness.

4.1.4 Number of Plants / Parts of Plants to be Examined

Unless otherwise indicated, for the purposes of distinctness, all observations on single plants should be made on 10 plants or parts taken from each of 10 plants and any other observations made on all plants in the test, disregarding any off-type plants.

4.1.5 Method of Observation

The recommended method of observing the characteristic for the purposes of distinctness is indicated by the following key in the second column of the Table of Characteristics (see document TGP/9 “Examining Distinctness”, Section 4 “Observation of characteristics”):

MG: single measurement of a group of plants or parts of plants
MS: measurement of a number of individual plants or parts of plants
VG: visual assessment by a single observation of a group of plants or parts of plants
VS: visual assessment by observation of individual plants or parts of plants

Type of observation: visual (V) or measurement (M)

“Visual” observation (V) is an observation made on the basis of the expert’s judgment. For the purposes of this document, “visual” observation refers to the sensory observations of the experts and, therefore, also includes smell, taste and touch. Visual observation includes observations where the expert uses reference points (e.g. diagrams, example varieties, side-by-side comparison) or non-linear charts (e.g. color charts). Measurement (M) is an objective observation against a calibrated, linear scale e.g. using a ruler, weighing scales, colorimeter, dates, counts, etc.

Type of record: for a group of plants (G) or for single, individual plants (S)

For the purposes of distinctness, observations may be recorded as a single record for a group of plants or parts of plants (G), or may be recorded as records for a number of single, individual

plants or parts of plants (S). In most cases, "G" provides a single record per variety and it is not possible or necessary to apply statistical methods in a plant-by-plant analysis for the assessment of distinctness."

In cases where more than one method of observing the characteristic is indicated in the Table of Characteristics (e.g. VG/MG), guidance on selecting an appropriate method is provided in document TGP/9, Section 4.2.

4.2 Uniformity

4.2.1 It is of particular importance for users of these Test Guidelines to consult the General Introduction prior to making decisions regarding uniformity. However, the following points are provided for elaboration or emphasis in these Test Guidelines:

(a) Cross-pollinated varieties

4.2.2 The assessment of uniformity for cross-pollinated varieties should be according to the recommendations for cross-pollinated varieties in the General Introduction.

(b) Hybrid varieties and inbred lines

4.2.3 For the assessment of uniformity of hybrids and inbred lines, a population standard of 2% and an acceptance probability of at least 95% should be applied. In the case of a sample size of 20 plants, 2 off-types are allowed.

4.3 Stability

4.3.1 In practice, it is not usual to perform tests of stability that produce results as certain as those of the testing of distinctness and uniformity. However, experience has demonstrated that, for many types of variety, when a variety has been shown to be uniform, it can also be considered to be stable.

4.3.2 Where appropriate, or in cases of doubt, stability may be further examined by testing a new seed stock to ensure that it exhibits the same characteristics as those shown by the initial material supplied.

5. Grouping of Varieties and Organization of the Growing Trial

5.1 The selection of varieties of common knowledge to be grown in the trial with the candidate varieties and the way in which these varieties are divided into groups to facilitate the assessment of distinctness are aided by the use of grouping characteristics.

5.2 Grouping characteristics are those in which the documented states of expression, even where produced at different locations, can be used, either individually or in combination with other such characteristics: (a) to select varieties of common knowledge that can be excluded from the growing trial used for examination of distinctness; and (b) to organize the growing trial so that similar varieties are grouped together.

5.3 The following have been agreed as useful grouping characteristics:

(a) Ploidy (characteristic 1)
(b) Leaf blade: degree of lobing (characteristic 8)
(c) Fruit: weight (1st mature fruit) (characteristic 11)
(d) Fruit: shape in longitudinal section (characteristic 12)
(e) Fruit: ground color of skin (characteristic 16)
(f) Only varieties with Fruit: ground color of skin: green: Fruit: intensity of ground color of skin (characteristic 17)
(g) Fruit: width of stripes (characteristic 21)
(h) Fruit: margin of stripes (characteristic 24)
(j) Fruit: main color of flesh (characteristic 30)
(k) Only diploid and tetraploid varieties: Seed: size (characteristic 35)
(l) Only diploid and tetraploid varieties: Seed: ground color of testa (characteristic 36)

5.4 Guidance for the use of grouping characteristics, in the process of examining distinctness, is provided through the General Introduction and document TGP/9 “Examining Distinctness”.

6. Introduction to the Table of Characteristics

6.1 Categories of Characteristics

6.1.1 Standard Test Guidelines Characteristics

Standard Test Guidelines characteristics are those which are approved by UPOV for examination of DUS and from which members of the Union can select those suitable for their particular circumstances.

6.1.2 Asterisked Characteristics

Asterisked characteristics (denoted by *) are those included in the Test Guidelines which are important for the international harmonization of variety descriptions and should always be examined for DUS and included in the variety description by all members of the Union, except when the state of expression of a preceding characteristic or regional environmental conditions render this inappropriate.

6.2 States of Expression and Corresponding Notes

6.2.1 States of expression are given for each characteristic to define the characteristic and to harmonize descriptions. Each state of expression is allocated a corresponding numerical note for ease of recording of data and for the production and exchange of the description.

6.2.2 In the case of qualitative and pseudo-qualitative characteristics (see Chapter 6.3), all relevant states of expression are presented in the characteristic. However, in the case of quantitative characteristics with 5 or more states, an abbreviated scale may be used to minimize the size of the Table of Characteristics. For example, in the case of a quantitative characteristic with 9 states, the presentation of states of expression in the Test Guidelines may be abbreviated as follows:

State	Note
small	3
medium	5
large	7

However, it should be noted that all of the following 9 states of expression exist to describe varieties and should be used as appropriate:

State	Note
very small	1
very small to small	2
small	3
small to medium	4
medium	5
medium to large	6
large	7
large to very large	8
very large	9

6.2.3 Further explanation of the presentation of states of expression and notes is provided in document TGP/7 “Development of Test Guidelines”.

6.3 Types of Expression

An explanation of the types of expression of characteristics (qualitative, quantitative and pseudo-qualitative) is provided in the General Introduction.

6.4 Example Varieties

Where appropriate, example varieties are provided to clarify the states of expression of each characteristic.

6.5 Legend

(*) Asterisked characteristic – see Chapter 6.1.2

QL Qualitative characteristic – see Chapter 6.3
QN Quantitative characteristic – see Chapter 6.3
PQ Pseudo-qualitative characteristic – see Chapter 6.3

MG, MS, VG, VS – see Chapter 4.1.5

(a) – (d) See Explanations on the Table of Characteristics in Chapter 8.1.

(+) See Explanations on the Table of Characteristics in Chapter 8.2.

7. Table of Characteristics/Tableau des caractères/Merkmalstabelle/Tabla de caracteres

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
1. **(*)** **(+)**	**VG**	**Ploidy**					
QL		diploid				SP 4, Sugar Baby, Yamato 3	2
		triploid				Boston, Kimiwa Red Seedless, TRIX 313	3
		tetraploid					4
2.	**MS/ VG**	**Cotyledon: size**					
QN	**(a)**	small				Crimson Glory, Kanro, Rapid	3
		medium				Crisby, Granit, Panni, Yamato 3	5
		large				Farao, Kurobe, Royal flesh hybrid	7
3. **(+)**	**VG**	**Cotyledon: shape**					
QN	**(a)**	narrow elliptic				Kahô	1
		medium elliptic				Crimson Sweet, Farao, Napsugár, Yamato 3,	2
		broad elliptic				Kanro	3
4.	**VG**	**Cotyledon: intensity of green color**					
QN	**(a)**	light				À graine rouge à confire à chair verte, Shin Kurobe 7	1
		medium				Jenny, Yamato 3	3
		dark				Boston, Kahô, SP 4	5
5.	**VG**	**Leaf blade: size**					
QN	**(b)**	small				SP 1, SP 4	1
		medium				Sugar Baby	3
		large				Topgun	5

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
6. **(+)**	**MS/ VG**	**Leaf blade: ratio length/width**	**Limbe: rapport longueur/largeur**	**Blattspreite: Verhältnis Länge/Breite**	**Limbo: relación entre la longitud y la anchura**		
QN	**(b)**	slightly elongated				Kanro	1
		moderately elongated				Sugar Baby, Yamato 3	2
		strongly elongated				Kurobe	3
7.	**VG**	**Leaf blade: color**					
PQ	**(b)**	yellowish green				Baby Fun, Okan	1
		green				Crimson Sweet, Yamato 3	2
		greyish green				Sugar Baby	3
		bluish green				SP 4	4
8. **(*)** **(+)**	**VG**	**Leaf blade: degree of lobing**					
QN	**(b)**	absent or very weak				Sunshade	1
		weak				Estrella, Karistan	3
		medium				Crimson Sweet, Crisby	5
		strong				Cadans	7
		very strong				SP 1	9
9.	**VG**	**Leaf blade: blistering (on 10th to 15th leaf)**					
QN	**(b)**	weak				Tabata, Estel	1
		medium				Yamato 3	2
		strong				Klondike Striped II, Sakura	3
10. **(+)**	**VG**	**Leaf blade: color of veins**					
QL	**(b)**	green				Asahiyamato	1
		yellow				Taiyô	2

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
11. **(*)**	**MS/** **MG**	**Fruit: weight** **(1st mature fruit)**					
QN	**(c)**	very low				Monaco, New Hampshire Midget	1
		very low to low				Mini, Petite Perfection	2
		low				Angela	3
		low to medium				Pasión, Sugar Baby	4
		medium				Boston	5
		medium to high				Crimson Sweet, Panonia	6
		high				Fabiola	7
		high to very high				Jubilee	8
		very high				Carolina Cross, Cobb's Gem Florida Giant	9
12. **(*)** **(+)**	**VG**	**Fruit: shape in longitudinal section**					
QN	**(c)**	circular				Camilla, Kanro	1
		broad elliptic				Fumin, Gray Belle, Yellow Baby, Zorba	2
		medium elliptic				Congo, Kurobe, Picnic	3
		elongated elliptic				Allsweet, Charleston Gray	4
13. **(+)**	**VG**	**Fruit: depression at base**					
QN	**(c)**	shallow				Kahô, Yellow Baby	3
		medium				Triple Sweet, Yamato 3	5
		deep				À graine rouge à confire à chair verte, Kanro	7
14. **(+)**	**VG**	**Fruit: shape of apical part**					
PQ	**(c)**	flat				Cream Sinka, Kanro	1
		flat to rounded					2
		rounded				Glory, Sugar Baby, Toro, Yamato 3	3
		rounded to conical					4
		conical				Kahô	5

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
15. **(+)**	**VG**	**Fruit: depression at apex**					
QN	**(c)**	shallow				Burpee Hybrid, Kahô, Valdoria	3
		medium				Asahi Miyako, Fumin	5
		deep				Cobb's Gem	7
16. **(*)** **(+)**	**VG**	**Fruit: ground color of skin**					
QL	**(c)**	yellow				Golden Dragon, Okan, Taiyô	1
		green				Crimson Sweet, Blanca de Benocaz, Fabiola, Napsugar , Sugar Baby, Sugar Belle	2
17. **(*)**	**VG**	**Only varieties with Fruit: ground color of skin: green: Fruit: intensity of ground color of skin**					
QN	**(c)**	very light				Tiger Baby	1
		very light to light					2
		light				Napsugar	3
		light to medium				Tigre	4
		medium				Pepsin	5
		medium to dark					6
		dark				Odem, Resistant, Sweet Marvel	7
		dark to very dark				Sugar Baby	8
		very dark				Augusta, Rocio	9
18.	**VG**	**Only varieties with Fruit: ground color of skin: yellow: Fruit: intensity of ground color of skin**					
QN	**(c)**	light					1
		medium					2
		dark					3

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
19. **(+)**	**VG**	**Fruit: conspicuousness of veining**					
QN	**(c)**	absent or very weak				Napsugar	1
		weak					2
		medium				Crimson Sweet	3
		strong				Trix Palomar	4
		very strong					5
20. **(*)** **(+)**	**VG**	**Fruit: patternation of stripes**					
PQ	**(c)**	one colored				Congo	1
		one colored and veins				Trix Palomar	2
		one colored, veins and marbled				Boston	3
		one colored and marbled				À graine rouge à confire à chair verte	4
		two colored, veins and marbled				Crisby	5
		only veins				Charleston Gray	6
21. **(*)** **(+)**	**VG**	**Fruit: width of stripes**					
QN	**(c)**	very narrow				Charleston Gray. Tiny Orchid	1
		narrow				Boston	3
		medium				Crimson Sweet	5
		broad				Sangria	7
		very broad				All Sweet	9
22. **(+)**	**VG**	**Fruit: intensity of main color of stripes**					
QN	**(c)**	very light					1
		light					2
		medium					3
		dark					4
		very dark					5

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
23. **(*)** **(+)**	**VG**	**Fruit: conspicuousness of stripes**					
QN	**(c)**	absent or very weak				Augusta	1
		weak				Odem	2
		medium				Trix Palomar	3
		strong				Jenny	4
		very strong				A graine rouge à confire à chaire verte	5
24. **(*)** **(+)**	**VG**	**Fruit: margin of stripes**					
QN	**(c)**	sharp				Jenny, Jubilee	1
		medium				Crimson Sweet	2
		diffuse				Crimson Glory, Crisby	3
25. **(+)**	**VG**	**Fruit: size of insertion of peduncle**					
QN	**(c)**	small				Charleston Gray, Sugar Bush	3
		medium				Fumin, Picnic	5
		large				Dixie Queen, Kanro	7
26.	**VG**	**Fruit: size of pistil scar**					
QN	**(c)**	small				Charleston Gray, Daisen	3
		medium				Yamato 3	5
		large				Kanro, Trix Palomar	7
27. **(+)**	**VG**	**Fruit: degree of grooving**					
QN	**(c)**	absent or very weak				Sugar Baby	1
		weak				Augusta, Kanro, Rapid	2
		medium				Asahi, Bego, Miyako	3
		strong				Marsowszky, Napsugár, Panni	4

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
28.	**VG**	**Fruit: waxy layer**					
(+)							
QN	**(c)**	absent or very weak				Betica	1
		medium				Sugar Baby	3
		very strong				Red Star, Romanza	5
29. **(old 41.)** **(*)** **(+)**	**MS/ VG**	**Fruit: thickness of pericarp**					
QN	**(c)**	very thin				Bibo, Tiny Orchid, Luciano	1
		thin				À graine rouge à confire à chair verte, Beni-kodama, Jenny, Kahô, Kassai	3
		medium				Panonia, Sugar Baby, Sugar Belle, Yamato 3	5
		thick				Charleston Gray, Crimson Sweet, Kurobe, Triple Sweet, Sunrise	7
		very thick				Coles Early, Kholodok	9
30. **(old 42.)** **(*)**	**VS**	**Fruit: main color of flesh**					
PQ	**(c)**	white				SP 4, SP1, Yamato Cream 3	1
		yellow				Napsugár, Yamato Cream 1	2
		orange				Kahô, Tendersweet	3
		pink				Sadul	4
		pinkish red				Bingo, Crimson Sweet	5
		red				Asahiy, Sugar Baby, Topgun	6
31. **(old 43.)**	**VG**	**Fruit: intensity of main color of flesh**					
QN	**(c)**	light					3
		medium					5
		dark					7

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
~~32 (old 44.)~~	~~MS~~	~~Fruit: firmness of flesh~~					
~~(+)~~							
~~QN~~	~~(c)~~	~~soft~~				~~Yamato Cream 2~~	~~3~~
		~~medium~~				~~Miyako 3~~	~~5~~
		~~firm~~				~~Fumin~~	~~7~~
33. (old 45.)	**MS/ VG**	**Only triploid varieties: Seed coat: size**					
(+)							
QN	**(d)**	very small				Petite Perfection	1
		small				Boston, Valdoria, Sweet Sun	2
		medium				Ortal, Tigre, Pasion	3
		large				Sunrise, Mabel	4
34. (old 46.)	**QN**	**Only diploid and tetraploid varieties: Fruit: number of seeds**					
VG	**(d)**	absent or few				Tanenashi Kôyô	1
		medium				Miyako 3	2
		many				Fumin	3
35. (old 47.) (*) (+)	**MS/ VG**	**Only diploid and tetraploid varieties: Seed: size**					
QN	**(d)**	very small				Kudam	1
		small				Panonia, Tabata	3
		medium				Sugar Baby	5
		large				Charleston Gray, Kurobe	7
		very large				Malali, Wanli	9

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
36. (old 48.) (+)	**VG**	**<u>Only diploid and tetraploid varieties:</u> Seed: ground color of testa**					
PQ	**(d)**	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
37. (old 49.) (+)	**VG**	**<u>Only diploid and tetraploid varieties:</u> Seed: secondary color of testa**					
QL	**(d)**	absent				Kahô	1
		present				Charleston Gray	9
~~**38. (old 50.) (+)**~~	~~**VG**~~	~~**Only diploid and tetraploid varieties: Seed: distribution of secondary color of testa**~~					
~~**PQ**~~	~~**(d)**~~	~~in dots only~~				~~Charleston Gray, Excel~~	~~1~~
		~~in dots and in patches~~				~~Lady, Yamato 3~~	~~2~~
		~~in patches only~~				~~Kurobe, Rattle Snake~~	~~3~~
39. (old 51.)	**VG**	**<u>Only diploid and tetraploid varieties:</u> Seed: area of secondary color in relation to that of ground color**					
QN	**(d)**	absent or very small				Estela roja	1
		small				Sugar Baby	3
		medium				Crimson Sweet	5
		large				Furia	7
		very large				Starlich	9

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
40. (old 52.) (+)	**VG**	**<u>Only diploid and tetraploid varieties:</u> Seed: patches at hilum**					
QL	**(d)**	absent				Daisen, Kahô	1
		present				Kurobe, Rattle Snake, Yamato 3	9
41. (old 53.)	**VG**	**Time of female flowering (50% of plants with at least one female flower)**					
QN		early				Tiny Orchid	3
		medium				Sugar Baby, Yamato 3	5
		late				Kurobe	7
~~42. (old 54.)~~	**~~VG~~**	**~~Time of maturity (50% of plants with at least one ripe fruit)~~**					
~~QN~~		~~early~~				~~Kahô, Sugar Baby~~	~~3~~
		~~medium~~				~~Panonia, Yamato 3~~	~~5~~
		~~late~~				~~Charleston Gray, Fumin, Kurobe~~	~~7~~
43. (old 55.) (+)		**Resistance to *Fusarium oxysporum* f.sp*. niveum***					
43.1 (old 55.1)		**Race 0**					
		absent				Kahô, Sugar Baby	1
		present				Calhoun Gray, Charleston Gray	9
43.2 (old 55.2)		**Race 1**					
		absent				Charleston Gray, Kahô, Sugar Baby	1
		present				Calhoun Gray	9
43.3 (old 55.3)		**Race 2**					
		absent				Calhoun Gray, Kahô	1
		present				PI 296341-FR	9

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
44. **(old 56)** **(+)**	**Resistance to *Colletotrichum orbiculare***					
44.1 **(old 56.1)**	**Race 1**					
	absent				Black Diamond, Calhoun Gray, Kahô	1
	present				Charleston Gray, Congo, Jubilee	9
~~**44.2**~~ ~~**(old 56.2)**~~	~~**Race 2**~~					
	~~absent~~				~~Kahô;~~	~~1~~
	~~present~~					~~9~~
~~**44.3**~~ ~~**(old 56.3)**~~	~~**Race 3**~~					
	~~absent~~				~~Kahô,~~	~~1~~
	~~present~~				~~Charleston Gray, Congo~~	~~9~~

8. Explanations on the Table of Characteristics

8.1 Explanations covering several characteristics

Characteristics containing the following key in the second column of the Table of Characteristics should be examined as indicated below:

(a) Cotyledon: All observations on the cotyledon should be observed when the cotyledons are fully developed and before the development of the first leaf: the surface is flat and the attitude is horizontal

Right stage for observation

(b) Leaf blade: All observations on the leaf blade should be made on fully developed leaves on the main vine, from the 10th to the 15th leaf, during fruit set, before the fruits are developed.

(c) Fruit: Unless otherwise indicated, all observations on the fruit should be made on first well developed, mature fruits.

(d) Seed: All observations on the seed should be recorded on fully developed, mature seeds harvested from the fruit.

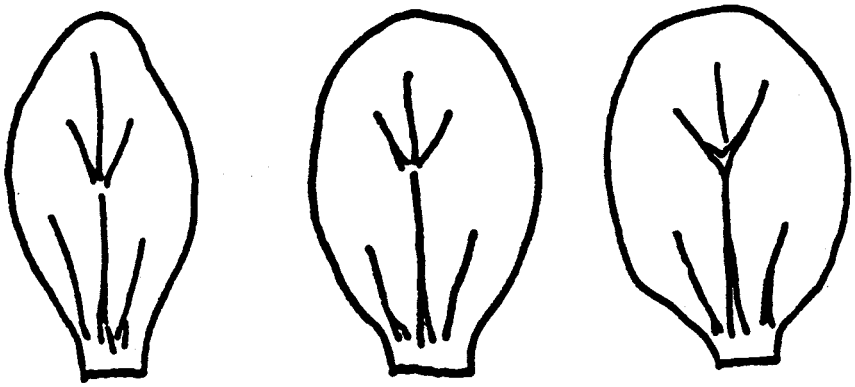
8.2 Explanations for individual characteristics

Ad. 1: Ploidy

Ploidy level may be detected by several methods:

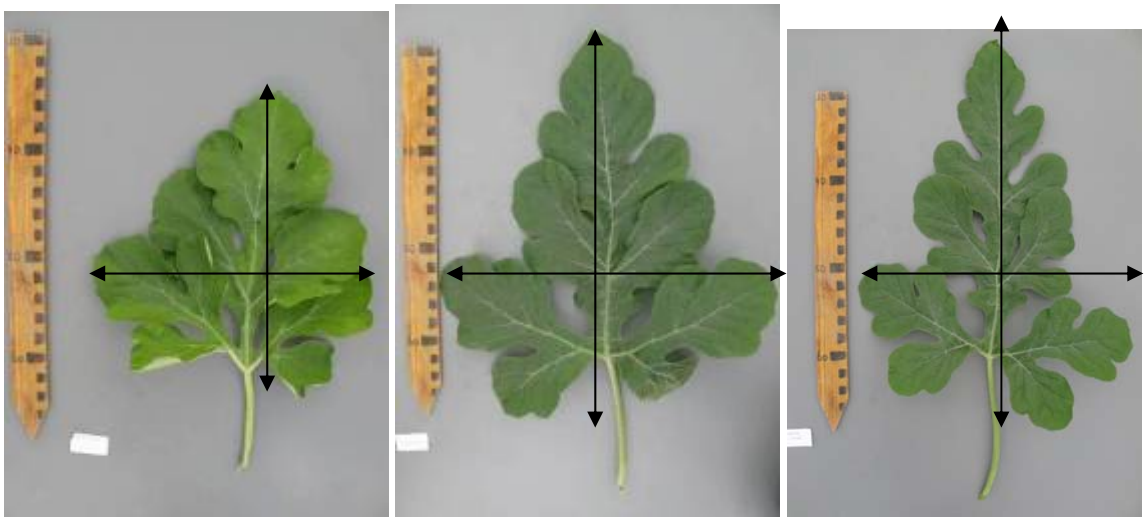
a. By counting chromosomes of cells under the microscope;
b. By counting the number chloroplasts of stomatal guard cells using a leaf peel under the microscope;
c. By flow cytometry.
d. Triploid varieties show a whitish seed coat without embryo.

Ad. 3: Cotyledon: shape



1	2	3
narrow elliptic	medium elliptic	broad elliptic

Ad. 6: Leaf blade: ratio length/width



1	2	3
slightly elongated	moderately elongated	strongly elongated

Ad. 8: Leaf blade: degree of lobing

1
absent or very weak

3
weak

5
medium

7
strong

9
very strong

Ad. 9: Leaf blade: blistering (on 10th to 15th leaf)

1	2	3
weak	medium	strong

Ad. 10: Leaf blade: color of veins

1	2
green	yellow

Ad. 12: Fruit: shape in longitudinal section

1
circular

2
broad elliptic

3
medium elliptic

4
elongated elliptic

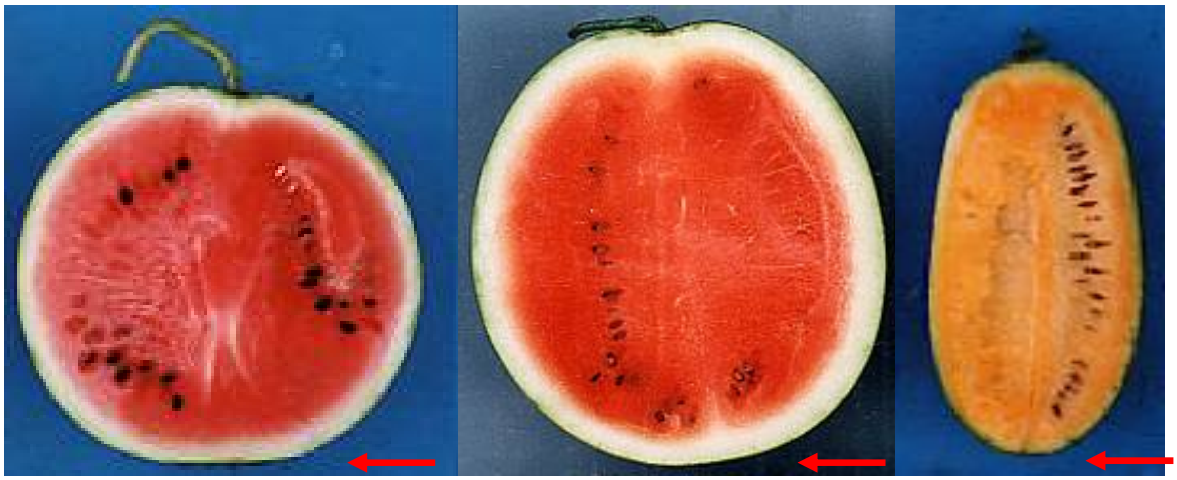
Ad. 13: Fruit: depression at base

3
shallow

5
medium

7
deep

Ad. 14: Fruit: shape of apical part



1
flat

3
rounded

5
conical

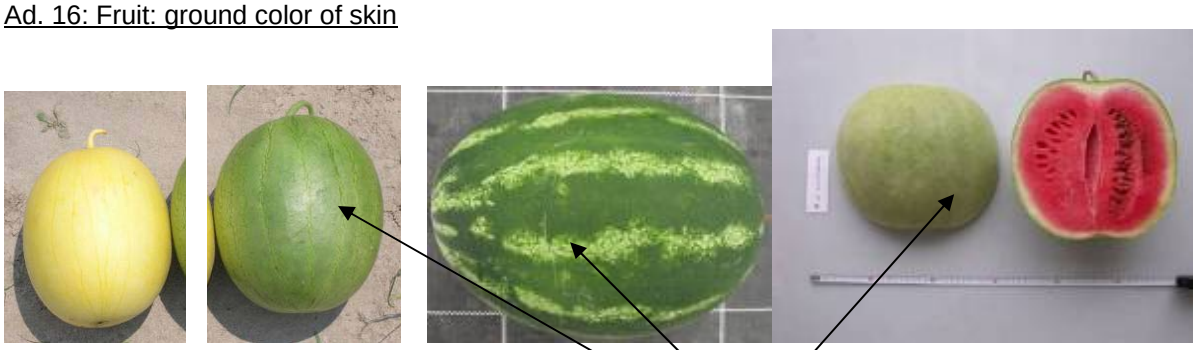
Ad. 15: Fruit: depression at apex

3
shallow

5
medium

7
deep

Ad. 16: Fruit: ground color of skin



1
yellow

2
green

In the case of striped fruits the ground color is defined as the lighter color and the color of the stripes as the darker color.

Ad. 17: Only varieties with Fruit: ground color of skin: green: Fruit: intensity of ground color of skin

1
very light

2
very light to light

3
light

4
light to medium

5
medium

6
medium to dark

7
dark

8
dark to very dark

9
very dark

Ad. 19: Fruit: conspicuousness of veining

1
absent or very weak

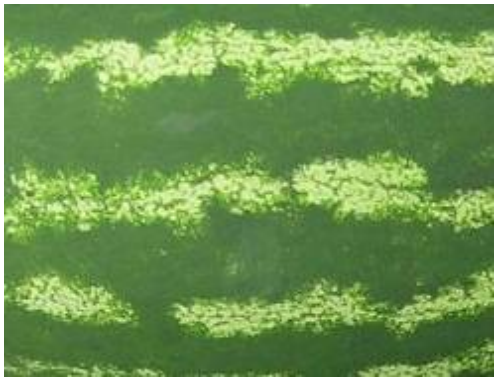
2
weak

3
medium

4
strong

Ad. 20: Fruit: patternation of stripes

In the case of striped fruits the ground color is defined as the lighter color and the color of the stripes as the darker color.

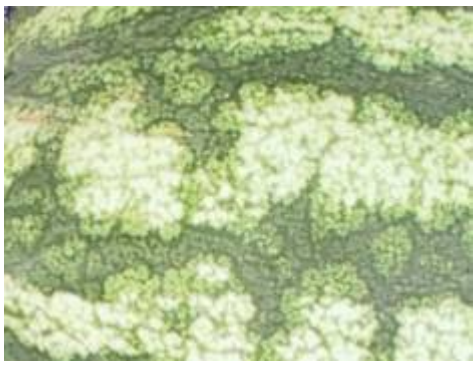


1
one colored

2
one colored and veins

3
one colored, veins and marbled

4
one colored and marbled



5
two colored, veins and marbled

6
only veins

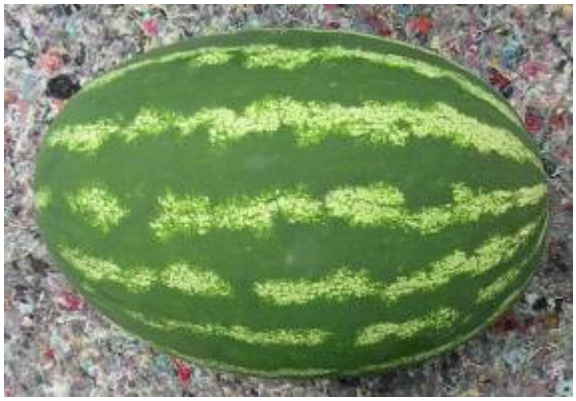
Ad. 21: Fruit: width of stripes

In the case of striped fruits the ground color is defined as the lighter color and the color of the stripes as the darker color.

1
very narrow

3
narrow

5
medium



7
broad

9
very broad

Ad. 22: Fruit: intensity of main color of stripes

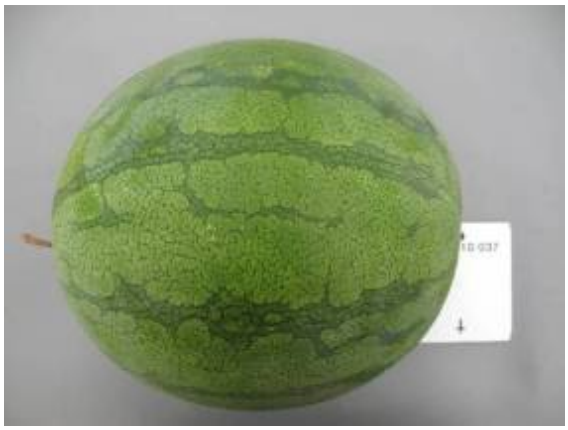
In the case of striped fruits the ground color is defined as the lighter color and the color of the stripes as the darker color.
Use the same scale as ground color.

Ad. 23: Fruit: conspicuousness of stripes

In the case of striped fruits the ground color is defined as the lighter color and the color of the stripes as the darker color.

1
absent or very weak

2
weak



3
medium

4
strong

5
very strong

Ad. 24: Fruit: margin of stripes

In the case of striped fruits the ground color is defined as the lighter color and the color of the stripes as the darker color.

1
sharp

2
medium

3
diffuse

Ad. 25: Fruit: size of insertion of peduncle

The size of the insertion of the peduncle is absolute and not relative to fruit size.

Ad. 27: Fruit: degree of grooving

1
absent or very weak

3
medium

Ad. 28: Fruit: waxy layer

1
absent or very weak

3
medium

5
very strong

Ad. 29 (old 41): Fruit: thickness of pericarp

1
very thin

3
thin

5
medium

7
thick

9
very thick

~~Ad. 32 (old 44): Fruit: firmness of flesh~~

~~Testing method: Firmness is measured by a hardness meter (tester), which has 9 mm (diameter head) and measures from 10 g/cm^2 - 2000 g/cm^2.~~

Ad. 33 (old 45): Only triploid varieties: Seed coat: size

1
very small

2
small

3
medium

4
large

Ad. 35 (old 47): Only diploid and tetraploid varieties: Seed: size

1	2	3	4	5	6	7	8	9
very small	very small to small	small	small to medium	medium	medium to large	large	large to very large	very large

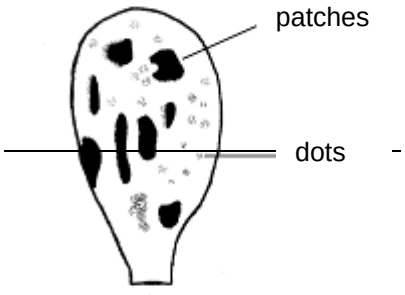
Ad. 36 (old 48): Only diploid and tetraploid varieties: Seed: ground color of testa

1	2	3	4	5	6	7
white	cream	green	red	red brown	brown	black

Ad. 37 (old 49): Only diploid and tetraploid varieties: Seed: secondary color of testa

1	9
absent	present

~~Ad. 38 (old 50): Only diploid and tetraploid varieties: Seed: distribution of secondary color of testa~~



Ad. 39 (old 51): Only diploid and tetraploid varieties: Seed: area of secondary color in relation to that of ground color

1	3	5	7	9
absent or very small	small	medium	large	very large

Ad 40 (old 52): Only diploid and tetraploid varieties: Seed: patches at hilum

1	9
absent	present

Ad 43 (old 55): Resistance to *Fusarium oxysporum* f. sp. *niveum*

1. Pathogen ..... *Fusarium oxysporum* f. sp. *niveum*
2. Quarantine status ..... no
3. Host species ..... watermelon (*Citrullus lanatus*)
4. Source of inoculum ..... Naktuinbouw
5. Isolate ..... Fon: 0, 1, 2
6. Establishment isolate identity ..... differentials
7. Establishment pathogenicity ..... susceptible varieties
8. Multiplication inoculums…….. PDA or PSA; renew from frozen stock annually
9. Format of the test
9.1 Number of plants per genotype 20
9.2 Number of replicates 2
9.3 Control varieties ..... differentials

	Fon: 0	Fon: 1	Fon: 2
Black Diamond, Kahô	S	S	S
Charleston Gray	R	S	S
Calhoun Gray	R	R	S
P.I. 296341-FR	R	R	R

9.4 Test design ..... include at least the two most informative differentials
9.5 Test facility ..... glasshouse or climate room
9.6 Temperature ..... day 25°C, night 15°C
9.7 Light ..... > 12 hours
9.9 Special measures ..... Apply liquid fertilizer once a week
10. Inoculation
10.1 Preparation inoculum ..... Czapek Dox or PS (potato and sugar) ; aerated liquid culture at 28°C; filter through double muslin
10.2 Quantification inoculum ..... count 1.3 x 10^7 spores per ml, dilute if necessary
10.3 Plant stage at inoculation ..... 2nd to 3rd leaf just expanding
10.4 Inoculation method ..... Soaking of roots and of hypocotyl axis for one minute
..... in inoculum solution. After inoculation, transplantation
..... of plantlets in steam-sterilised soil or perlite.
10.5 First observation ..... 7 days after inoculation
10.6 Second observation ..... 14 days after inoculation
10.7 End of test ..... 21 days after inoculation

11. Observations
11.1 Method ..... Visual, external
11.2 Observation scale ..... Symptoms: Yellowing, wilting and plant death
11.3 Validation of test ..... standard varieties
12. Interpretation of data in terms of UPOV characteristic states
..... [1] with external symptoms
..... [9] without external symptoms
13. Critical control points
Resistant plants show no or little delayed growth but no internal or external symptoms. Vascular browning is the most reliable diagnostic symptom. Plants with external symptoms should have vascular browning, otherwise the symptom may be caused by *Pythium*.

Ad 44 (old 56): Resistance to *Colletotrichum orbiculare*

1. Pathogen ..... *Colletotrichum orbiculare* (anthracnose)
2. Quarantine status ..... no
3. Host species ..... *Citrullus lanatus* (watermelon)
4. Source of inoculum ..... Academic research
5. Isolate ..... Co: 1
6. Establishment isolate identity ..... on differentials
7. Establishment pathogenicity ..... on susceptible varieties
8. Multiplication inoculum .....
8.1 Multiplication medium …… PSA, renew from frozen stock annually
9.1 Number of plants per genotype 20
9.2 Number of replicates 2
9.3 Control varieties differentials: Calhoun Gray susceptible,
..... Charleston Gray resistant
9.4 Test design ..... including at least the most informative differentials
9.5 Test facility ..... glasshouse or climate room
9.6 Temperature ..... day 25°C, night 16°C
9.7 Light ..... >12 hours
9.9 Special measures ..... Inoculated plants should be placed in a dark and
..... humid chamber at 25°C with 100% relative humidity
..... for 48 hours before being moved to the greenhouse.
10. Inoculation
10.1 Preparation inoculum ..... Shaking culture in P.D. (Potato and Dextrose)
..... liquid medium for 7 to 10 days at 28°C.
..... Filter the medium through double muslin cloth.
10.2 Quantification inoculum ..... $1.5*10^4$ spores per ml
10.3 Plant stage at inoculation ..... 2nd or 3rd leaf just expanding
10.4 Inoculation method ..... spraying of inoculum on leaf and stem
10.5 First observation ..... 7 days
10.7 End of test ..... 10 days
11. Observations
11.1 Method ..... Visual
11.2 Observation scale ..... Lesions > 2 mm indicate susceptibility.
Lesions may coalesce and kill the leaf back to the petiole.
11.3 Validation of test ..... on standard varieties
12. Interpretation of data in terms of UPOV characteristic states
..... [1] lesions more than 2 mm in size
..... [9] lesions absent or less than 2 mm in size
13. Critical control points
Lesions that stay small and tend towards necrosis indicate resistance. Complete absence of symptoms indicates a low disease pressure or high resistance.

9. Literature

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10. Technical Questionnaire

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

	Application date: (not to be filled in by the applicant)

TECHNICAL QUESTIONNAIRE
to be completed in connection with an application for plant breeders' rights

1. Subject of the Technical Questionnaire

1.1 Botanical name	*Citrullus lanatus* (Thunb.) Matsum. et Nakai
1.2 Common name	Watermelon

2. Applicant

Name	
Address	
Telephone No.	
Fax No.	
E-mail address	
Breeder (if different from applicant)	

3. Proposed denomination and breeder's reference

Proposed denomination (if available)	
Breeder's reference	

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

[#]4. Information on the breeding scheme and propagation of the variety

4.1 Breeding scheme

Variety resulting from:

4.1.1 Crossing

(a) controlled cross [ ]
(please state parent varieties)

(……..……..) x (……..……..)
female parent male parent

(b) partially known cross [ ]
(please state known parent variety(ies))

(……..……..) x (……..……..)
female parent male parent

(c) unknown cross [ ]

4.1.2 Mutation [ ]
(please state parent variety)

4.1.3 Discovery and development [ ]
(please state where and when discovered and how developed)

4.1.4 Other [ ]
(please provide details)

[#] Authorities may allow certain of this information to be provided in a confidential section of the Technical Questionnaire.

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

4.2 Method of propagating the variety

4.2.1 Seed-propagated varieties

(a)	Self-pollination	[ ]
(b)	Cross-pollination	
	(i) population	[ ]
	(ii) synthetic variety	[ ]
(c)	Hybrid	[ ]
(d)	Other (please provide details)	[ ]

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

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 (1)	**Ploidy**		
	diploid	SP 4, Sugar Baby, Yamato 3	2[ ]
	triploid	Boston, Kimiwa Red Seedless, TRIX 313	3[ ]
	tetraploid		4[ ]
5.2 (8)	**Leaf blade : degree of lobing**		
	absent or very weak	Sunshade	1[ ]
	very weak to weak		2[ ]
	weak	Estrella, Karistan	3[ ]
	weak to medium		4[ ]
	medium	Crimson Sweet, Crisby	5[ ]
	medium to strong		6[ ]
	strong	Cadans	7[ ]
	strong to very strong		8[ ]
	very strong	SP 1	9[ ]
5.3 (11)	**Fruit: weight (1st mature fruit)**		
	very low	Monaco, New Hampshire Midget	1[ ]
	very low to low	Mini, Petite Perfection	2[ ]
	low	Angela	3[ ]
	low to medium	Pasión, Sugar Baby	4[ ]
	medium	Boston	5[ ]
	medium to high	Crimson Sweet, Panonia	6[ ]
	high	Fabiola	7[ ]
	high to very high	Jubilee	8[ ]
	very high	Carolina Cross, Cobb's Gem, Florida Giant	9[ ]

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

	Characteristics	Example Varieties	Note
5.4 (12)	**Fruit: shape in longitudinal section**		
	circular	Camilla, Kanro, Sugar Baby	1[ ]
	broad elliptic	Fumin, Gray Belle, Yellow Baby, Zorba	2[ ]
	medium elliptic	Congo, Kurobe, Picnic	3[ ]
	elongated elliptic	Allsweet, Charleston Gray	4[ ]
5.5 (16)	**Fruit: ground color of skin**		
	yellow	Golden Dragon, Okan, Taiyô	1[ ]
	green	Crimson Sweet, Blanca de Benocaz, Fabiola, Napsugar, Sugar Baby, Sugar Belle	2[ ]
5.6 (17)	**Only varieties with Fruit: ground color of skin: green: Fruit: intensity of ground color of skin**		
	very light	Tiger Baby	1[ ]
	very light to light		2[ ]
	light	Napsugar	3[ ]
	light to medium	Tigre	4[ ]
	medium	Pepsin	5[ ]
	medium to dark		6[ ]
	dark	Odem, Resistant, Sweet Marvel	7[ ]
	dark to very dark	Sugar Baby	8[ ]
	very dark	Augusta, Rocio	9[ ]
5.7 (21)	**Fruit: width of stripes**		
	very narrow	Charleston Gray, 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[ ]

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

	Characteristics	Example Varieties	Note
5.8 (24)	**Fruit: margin of stripes**		
	sharp	Jenny, Jubilee	1[ ]
	medium	Crimson Sweet	2[ ]
	diffuse	Crimson Glory, Crisby	3[ ]
5.9 (30)	**Fruit: main color of flesh**		
	white	SP 4, SP1,Yamato Cream 3	1[ ]
	yellow	Napsugár, Yamato Cream 1	2[ ]
	orange	Kahô, Tendersweet	3[ ]
	pink	Sadul	4[ ]
	pinkish red	Bingo, Crimson Sweet	5[ ]
	red	Asahiy, Sugar Baby, Topgun	6[ ]
5.10 (35)	**Only diploid and tetraploid varieties: Seed: size**		
	very small	Kudam	1[ ]
	very small to small		2[ ]
	small	Panonia, Tabata	3[ ]
	small to medium		4[ ]
	medium	Sugar Baby	5[ ]
	medium to large		6[ ]
	large	Charleston Gray, Kurobe	7[ ]
	large to very large		8[ ]
	very large	Malali, Wanli	9[ ]
5.11 (36)	**Only diploid and tetraploid varieties: Seed: ground color of testa**		
	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

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

6. Similar varieties and differences from these varieties

Please use the following table and box for comments to provide information on how your candidate variety differs from the variety (or varieties) which, to the best of your knowledge, is (or are) most similar. This information may help the examination authority to conduct its examination of distinctness in a more efficient way.

Denomination(s) of variety(ies) similar to your candidate variety	Characteristic(s) in which your candidate variety differs from the similar variety(ies)	Describe the expression of the characteristic(s) for the **similar** variety(ies)	Describe the expression of the characteristic(s) for **your** candidate variety
Example	*Fruit: width of stripes*	*narrow*	*medium*

Comments:

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

[#]7. Additional information which may help in the examination of the variety

7.1 In addition to the information provided in sections 5 and 6, are there any additional characteristics which may help to distinguish the variety?

Yes [ ] No [ ]

(If yes, please provide details)

7.2 Are there any special conditions for growing the variety or conducting the examination?

Yes [ ] No [ ]

(If yes, please provide details)

7.3 Other information

A representative color image of the variety should accompany the Technical Questionnaire.

8. Authorization for release

(a) Does the variety require prior authorization for release under legislation concerning the protection of the environment, human and animal health?

Yes [ ] No [ ]

(b) Has such authorization been obtained?

Yes [ ] No [ ]

If the answer to (b) is yes, please attach a copy of the authorization.

[#] Authorities may allow certain of this information to be provided in a confidential section of the Technical Questionnaire.

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

9. Information on plant material to be examined or submitted for examination.

9.1 The expression of a characteristic or several characteristics of a variety may be affected by factors, such as pests and disease, chemical treatment (e.g. growth retardants or pesticides), effects of tissue culture, different rootstocks, scions taken from different growth phases of a tree, etc.

9.2 The plant material should not have undergone any treatment which would affect the expression of the characteristics of the variety, unless the competent authorities allow or request such treatment. If the plant material has undergone such treatment, full details of the treatment must be given. In this respect, please indicate below, to the best of your knowledge, if the plant material to be examined has been subjected to:

(a)	Microorganisms (e.g. virus, bacteria, phytoplasma)	Yes [ ]	No [ ]
(b)	Chemical treatment (e.g. growth retardant, pesticide)	Yes [ ]	No [ ]
(c)	Tissue culture	Yes [ ]	No [ ]
(d)	Other factors	Yes [ ]	No [ ]

Please provide details for where you have indicated “yes”.

……

10. I hereby declare that, to the best of my knowledge, the information provided in this form is correct:

Applicant’s name

Signature Date

[Annex follows]

ANNEX WITH REMARKS TO UPOV WATERMELON DRAFT 2010-2012

5.3 *Grouping characteristics*

(2011) The grouping characteristics were not discussed in 2010/2011, proposal to discuss this new proposal after the contents of chapter 7: table of characteristics are discussed.
Es: Not agree with the lobing added. This crop has enough other grouping characteristics, and the lobbing have certain risk of lack of consistency, for the variability into the plant.

7. *Table of Characteristics*

(2011) Nb: The order of the characteristics (shape, color, etc.) has been changed, according to the proposals in 2010, and the numbering of the characterisics has been changed accordingly up to number 28. From characteristic 40 the numbering from TG/142/5(proj.1) 2010-5-21 has been followed.
(2011) ISF: Consider the use of the Royal Horticulture Color Chart or the reading of Colorimeter for colors as this will provide more measurement of distinctness. The reference varieties should be replaced with the varieties that are available for breeder to reference. Some of the reference varieties are simply not available.
NL: the experts are asked to go through their files or collection to find out whether the example varieties are still available.

Char. 1: Japan to check whether Kimiwa Red Seedless still exists

Char. 14: see explanation, other photo for stage 5 needed from Japan, to be rediscussed 2012.
France: the stages 4 and 5 are not clear. The conical shape of the apical part can be due - sometimes…- to a default of pollination.
To see pictures in Ad.14

Char. 17: IT to provide names of example varieties for state 2 and 6; see table Ad 17

Char. 18: Japan to provide example varieties

Characteristics still to be discussed in 2012

Char. 29 (old 41):
(2010) Fr accepts mod ex. vars
(2011) Hu : are still seeds available from Coles Early (1892)?
(2011) NL: answer or example of living variety to be provided by ISF
(2012) photo's of Coles Early and/or Kholodok needed

Char. 31 (old 43)

Proposal NL to delete Char 43. (old 37), as this is very dependent on state of maturity of the fruit Hu agrees with deletion;

FR and IT agree to delete.

ISF (2010) proposes Add CHARLESTON GRAY for level 3; Add TRIX 313 for level 5; Add SUNSUGAR and TOP GUN for level 7

(2011)

KR: very dependant on state of maturity, but still distinctive at the time of ordinary maturity. Proposal to provide photo’s, if included.

HU: the harvesting time influences this characteristic, evaluation of the little genetical difference is difficult

ISF proposes New Hampshire Midget for 3, Kholodok for 5
ES: Not a big variability, but easy to assess and may be useful to distinctness of pair of varieties. To keep

NL: keep proposal to delete, 42 is sufficient for distinctness

Char. 32 (old 44)

Proposal NL to delete Char 44 (old 38), as this is very dependent on state of maturity of the fruit

HU, KR, IT, ES, FR agree

ISF: Add SANGRIA for level 7

NL: keep proposal to delete

Char. 33 (old 45)

HU, IT and FR agree with new 45

ES: We observe it since several years, and we found it quite variable, probably by the difficulty to observe properly. There are variability into the same fruit, inter fruits and along the years. Not possible to assess the uniformity. Considering it as average tendency, we propose to consider only 3 notes as condensed quantitative.

1.Small	Valdoria, Merisin, Sweet Sun, Petite Perfection
2.Medium	Tigre, Pasion
3.Big	Sunrise, Mabel

Scale 3 to 7 is more than enough

NL: proposal to make it a scale from 1 to 4

Char. 37 (old 49)

ES: Char 49 Seed: secondary color (To add excluding hilum)
1- Absent or very weak
2- Present

NL: Not to take over as Kahô is really absent

Char. 38 (old 50)

ES: It is very difficult to assess in many cases. It is clear in the drawing of the explanation, but not in the reality, nor in many of the photos. I propose to delete it.

NL: agree to delete

Char. 39 (old 51)

Proposal NL to delete characteristic 51 (old 44)

FR, KR, IT agree

New proposal ES (2012):
In our opinion should be more useful a condensed quantitative because there are varieties that can be recognized by the very intense black patches at hilum. So our proposal is

1.Absent or very weak expressed	Kahô
2.Medium	Betica, Kameni, Desvelo
3 Strongly expressed	Furia, Augusta, Nubia

NL: to be discussed, see also explanation

Char. 40 (old 52)

ISF: skip
ES: To replace absent with absent or very weak
NL: to be discussed

Char. 42 (old 54)

Proposal NL to delete characteristic 54 (old 47) HU and ES agree with deletion, ES because abortion of small fruits is very usual, which makes the characteristic not useful for distinctness.

FR: the deletion have to be discussed. It is an important characteristic, but not so easy to assess.... If it is maintained, it needs further explanations.

ISF proposes to add Bonanza for 3 NL: not to take over, as the proposal is to delete char. 54 (old 47)

IT: Time of maturity is difficult to assess. We suggest to determine the time of maturity with the observation of browning of basal cirrus closer to the fruit

NL keeps the proposal to delete

Char 43 (old 55): Resistance to *Fon*, **Char 44 (old 56):** Resistance to *Colletotrichum orbiculare*
FR: need to display example varieties easier (most recent) to obtain

8. Explanations on the Table of Characteristics

Ad 14: other photo for stage 5 needed, if there is not any, proposal NL and FR to delete state 4 and 5

Remark of FR:
ie: 2 pictures of the variety EMERALD, in 2002, and 2003. The fruit in the second one is slightly conical, but the observation is not typical of this variety. This fruit is not really well formed.

Ad 15: To replace drawings by photo's

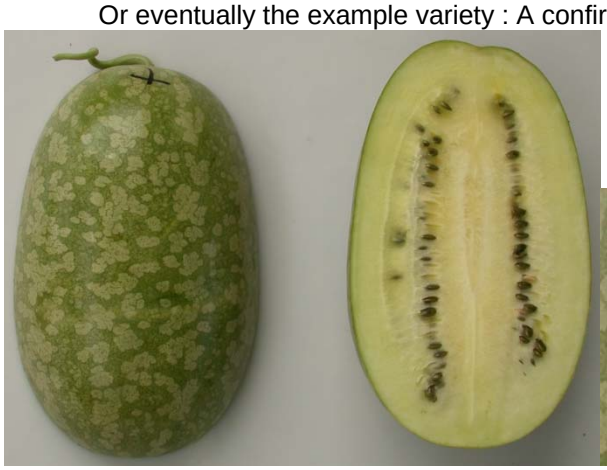
Ad 17: FR: State 3: light
The picture is not really relevant… the fruit in the picture looks like a fruit at overmaturity …

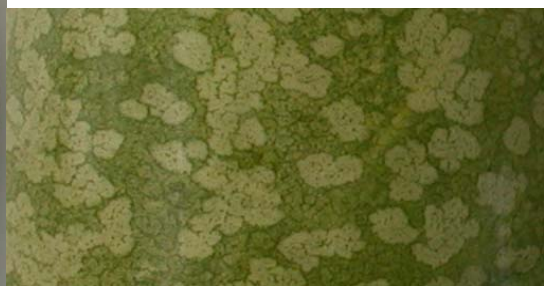
Ad 19: Fruit: conspicuousness of veining

Question: how to describe this? FR proposal: very narrow stripes, without veining

Ad.20: Fruit: patternation of stripes
FR: I still have difficulties to clearly understand the meaning of the word “marbled”…, in the state 4.
The example variety to illustrate this sate is ‘A graine rouge à confire à chaire verte’

Or eventually the example variety : A confire allongée à graine verte





"To explain verbally..."

ES: Referring to Chrystelle comment:
The type 4: one coloured and marbled is not very frequent. The varieties in this group *must not have veining into the stripes*. The enlarged photo of the variety”A confire allongée à graine verte” shows clearly veins into the stripes, so it belongs to type 3. The actual photo in the ad 20 explanation seems not to have veining and consequently would be good for explanation. Other possibility would be some variety with very dark stripes, where the veining be not visible, but may have marbling.
The marbling in the context of this characteristic means the presence into the stripes of closed regions, more or less rounded, with the subjacent clearer colour.

Ad 23
France to provide picture for state (5) (“a graine rouge a confire a chair verte”)

Technical Questionnaire

ISF: delete following sentence: In the case of hybrid varieties etc.

4.1.1: ISF: Crossing: this scheme is appropriate for hybrid varieties. Which choice should be made when applying for a parental line, since usually it is a controlled cross, but with a larger number of “parent varieties”.

5. Characteristics to be included: NL: proposal to include only the grouping characteristics

[End of Annex and of document]