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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

GENEVA

MELON *

UPOV Code: CUCUM_MEL

Cucumis melo L.

GUIDELINES

FOR THE CONDUCT OF TESTS

FOR DISTINCTNESS, UNIFORMITY AND STABILITY

Alternative Names:*

Botanical name	*English*	*French*	*German*	*Spanish*
Cucumis melo L.	Melon	Melon	Melone	Melón

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 *Cucumis melo* L.

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:

100 g or 2000 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.

The recommended method of observing the characteristic is indicated by the following key in the second column of the Table 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

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 two or more 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.

3.5 Number of Plants / Parts of Plants to be Examined

Unless otherwise indicated, all observations should be made on 20 plants or parts taken from each of 20 plants.

3.6 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.

4.2 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:

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.

4.2.3 For the assessment of uniformity of self-pollinated varieties, vegetatively propagated varieties and hybrid varieties, a population standard of 1 % and an acceptance probability of at least 95 % should be applied. In the case of a sample size of 20 plants, 1 off-type is 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 tested, either by growing a further generation, or by testing a new seed stock to ensure that it exhibits the same characteristics as those shown by the previous material supplied.

4.3.3 Where appropriate, or in cases of doubt, the stability of a hybrid variety may, in addition to an examination of the hybrid variety itself, also be assessed by examination of the uniformity and stability of its parent lines.

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) Inflorescence: sex expression (at full flowering) (characteristic 12)
(b) Fruit: shape in longitudinal section (characteristic 28)
(c) Fruit: ground color of skin (characteristic 29)
(d) Fruit: warts (characteristic 38)
(e) Fruit: grooves (characteristic 43)
(f) Fruit: cork formation (characteristic 48)
(g) Fruit: main color of flesh (characteristic 54)
(h) Seed: length (characteristic 60)
(i) Seed: color (characteristic 63)

5.4 Guidance for the use of grouping characteristics, in the process of examining distinctness, is provided through the General Introduction.

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

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.

6.3 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: See Chapter 3.3

(a)-(e) 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**	**Seedling: length of hypocotyl**	**Plantule: longueur de l'hypocotyle**	**Keimpflanze: Länge des Hypokotyls**	**Plántula: longitud del hipocótilo**		
QN	**(a)**	very short	très court	sehr kurz	muy corto	Golden Crispy	1
		short	court	kurz	corto	Arava, Clipper	3
		medium	moyen	mittel	medio	Doral, Futuro	5
		long	long	lang	largo	Bimbo, Ronda	7
		very long	très long	sehr lang	muy largo	Noy	9
2.	**VG**	**Seedling: size of cotyledon**	**Plantule: taille du cotylédon**	**Keimpflanze: Größe der Keimblätter**	**Plántula: tamaño del cotiledón**		
QN	**(a)**	very small	très petit	sehr klein	muy pequeño	Golden Crispy	1
		small	petit	klein	pequeño	Candy, Lunasol	3
		medium	moyen	mittel	medio	Futuro, Sancho	5
		large	grand	groß	grande	Bimbo, Nicolás	7
		very large	très grand	sehr groß	muy grande	Noy	9
3.	**VG**	**Seedling: intensity of green color of cotyledon**	**Plantule: intensité de la couleur verte du cotylédon**	**Keimpflanze: Intensität der Grünfärbung der Keimblätter**	**Plántula: intensidad del color verde del cotiledón**		
QN	**(a)**	light	clair	hell	claro	Bimbo, Lucas	3
		medium	moyen	mittel	medio	Candy, Piel de Sapo	5
		dark	foncé	dunkel	oscuro	Clipper, Lunasol	7
4.	**VG**	**Leaf blade: size**	**Limbe: taille**	**Blattspreite: Größe**	**Limbo: tamaño**		
QN	**(b)**	small	petit	klein	pequeño	Geaprince, Lunasol	3
		medium	moyen	mittel	medio	Candy, Total	5
		large	grand	groß	grande	Don, Sucrero	7

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
5.	**VG**	**Leaf blade: intensity of green color**	**Limbe: intensité de la couleur verte**	**Blattspreite: Intensität der Grünfärbung**	**Limbo: intensidad del color verde**		
QN	**(b)**	light	clair	hell	claro	Fimel, Yuma	3
		medium	moyen	mittel	medio	Doral, Galia	5
		dark	foncé	dunkel	oscuro	Gama, Gustal	7
6. **(+)**	**VG**	**Leaf blade: development of lobes**	**Limbe: développement des lobes**	**Blattspreite: Ausprägung der Lappen**	**Limbo: desarrollo de los lóbulos**		
QN	**(b)**	weak	faible	gering	débil	Boule d'or	3
		medium	moyen	mittel	medio	Piel de Sapo	5
		strong	fort	stark	fuerte	Galia	7
7. **(+)**	**VG**	**Leaf blade: length of terminal lobe**	**Limbe: longueur du lobe terminal**	**Blattspreite: Länge des Endlappens**	**Limbo: longitud del lóbulo terminal**		
QN	**(b)**	short	court	kurz	corto	Perlita	3
		medium	moyen	mittel	medio	Clipper, Gama	5
		long	long	lang	largo	Gustal, Primal	7
8.	**VG**	**Leaf blade: dentation of margin**	**Limbe: dentelure du bord**	**Blattspreite: Randzähnung**	**Limbo: dentado del margen**		
QN	**(b)**	weak	faible	gering	débil	Clipper, Védrantais	3
		medium	moyenne	mittel	medio	De Cavaillon espagnol, Piel de Sapo	5
		strong	forte	stark	fuerte	Boule d'or, Portoluz	7
9.	**VG**	**Leaf blade: blistering**	**Limbe: cloqûre**	**Blattspreite: Blasigkeit**	**Limbo: abullonado**		
QN	**(b)**	weak	faible	gering	débil	Galia	3
		medium	moyenne	mittel	medio	Costa	5
		strong	forte	stark	fuerte	Haros	7

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
10.	**VG**	**Petiole: attitude**	**Pétiole: port**	**Blattstiel: Haltung**	**Pecíolo: porte**		
QN	**(b)**	erect	dressé	aufrecht	erecto	Alfredo	1
		semi-erect	demi-dressé	halbaufrecht	semierecto	Peko	3
		horizontal	horizontal	waagerecht	horizontal	Creso	5
11.	**VG/ MS**	**Petiole: length**	**Pétiole: longueur**	**Blattstiel: Länge**	**Pecíolo: longitud**		
QN	**(b)**	short	court	kurz	corto	Costa	3
		medium	moyen	mittel	medio	Arava, Sancho	5
		long	long	lang	largo	Goldgen	7
12. (*)	**VG**	**Inflorescence: sex expression (at full flowering)**	**Inflorescence: expression du sexe (en pleine floraison)**	**Blütenstand: Geschlechts-verteilung (bei Vollblüte)**	**Inflorescencia: expresión del sexo (en plena floración)**		
QL		monoecious	monoïque	monözisch	monócico	Alpha, Categoría	1
		andromonoecious	andromonoïque	andromonözisch	andromonócico	Piel de Sapo	2
13. (+)	**VG**	**Young fruit: hue of green color of skin**	**Jeune fruit: teinte de couleur verte de l'épiderme**	**Junge Frucht: Farbton der Grünfärbung der Schale**	**Fruto joven: tonalidad del color verde de la piel**		
PQ	**(c)**	whitish green	vert blanchâtre	weißlichgrün	verde blanquecino	Geasol	1
		yellowish green	vert jaunâtre	gelblichgrün	verde amarillento	Fimel	2
		green	vert	grün	verde	Lucas	3
		greyish green	vert grisâtre	gräulichgrün	verde grisáceo	Spanglia	4

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
14. (*)	**VG**	**Young fruit: intensity of green color of skin**	**Jeune fruit: intensité de la couleur verte de l'épiderme**	**Junge Frucht: Intensität der Grünfärbung der Schale**	**Fruto joven: intensidad del color verde de la piel**		
QN	**(c)**	very light	très clair	sehr hell	muy clara	Solarking	1
		light	clair	hell	clara	Fimel	3
		medium	moyen	mittel	media	Eros	5
		dark	foncé	dunkel	oscura	Galia	7
		very dark	très foncé	sehr dunkel	muy oscura	Edén	9
15.	**VG**	**Young fruit: density of dots**	**Jeune fruit: densité des points**	**Junge Frucht: Dichte der Punkte**	**Fruto joven: densidad de los puntos**		
QN	**(c)**	absent or very sparse	nulle ou très lâche	fehlend oder sehr locker	ausente o muy baja	Solarking	1
		sparse	lâche	locker	baja	Fimel	3
		medium	moyenne	mittel	media	Lucas	5
		dense	dense	dicht	densa	Arava	7
		very dense	très dense	sehr dicht	muy densa	Edén	9
16.	**VG**	**Young fruit: size of dots**	**Jeune fruit: taille des points**	**Junge Frucht: Größe der Punkte**	**Fruto joven: tamaño de los puntos**		
QN	**(c)**	small	petits	klein	pequeño	Lucas	3
		medium	moyens	mittel	medio	Arava	5
		large	grands	groß	grande	Spanglia	7
17.	**VG**	**Young fruit: contrast of dot color/ground color**	**Jeune fruit: contraste couleur des points/couleur de fond**	**Junge Frucht: Kontrast Farbe der Punkte/Grundfarbe**	**Fruto joven: contraste del color de los puntos/color del fondo**		
QN	**(c)**	weak	faible	gering	débil	Lucas	3
		medium	moyen	mittel	medio	Arava	5
		strong	fort	stark	fuerte	Total	7

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
18.	**VG**	**Young fruit: conspicuousness of groove coloring**	**Jeune fruit: netteté de la coloration du sillon**	**Junge Frucht: Deutlichkeit der Färbung der Furchen**	**Fruto joven: evidencia de conspicuidad de los surcos**		
QN	**(c)**	absent or very weak	nulle ou très faible	fehlend oder sehr gering	ausente o muy débil	Solarking	1
		weak	faible	gering	débil	Geaprince, Total	3
		medium	moyenne	mittel	media	Gama	5
		strong	forte	stark	fuerte	Clipper, Galia	7
		very strong	très forte	sehr stark	muy fuerte	Nembo	9
19.	**VG**	**Young fruit: intensity of groove coloring**	**Jeune fruit: intensité de la coloration du sillon**	**Junge Frucht: Intensität der Färbung der Furchen**	**Fruto joven: intensidad del color de los surcos**		
QN	**(c)**	light	claire	hell	clara		3
		medium	moyenne	mittel	media	Gama, Topper	5
		dark	foncée	dunkel	oscura	Century, Drake	7
20.	**VG/ MS**	**Young fruit: length of peduncle**	**Jeune fruit: longueur du pédoncule**	**Junge Frucht: Länge des Stiels**	**Fruto joven: longitud del pedúnculo**		
QN	**(c)**	short	court	kurz	corto	Lince Haros	3
		medium	moyen	mittel	medio	Arava, Romeo	5
		long	long	lang	largo	Corín	7
21.	**VG/ MS**	**Young fruit: thickness of peduncle 1 cm from fruit**	**Jeune fruit: grosseur du pédoncule à 1 cm du fruit**	**Junge Frucht: Dicke des Stiels 1 cm von der Ansatzstelle der Frucht**	**Fruto joven: grosor del pedúnculo 1 cm a partir del fruto**		
QN	**(c)**	thin	fin	dünn	delgado	Solarking	3
		medium	moyen	mittel	medio	Geaprince, Védrantais	5
		thick	gros	dick	grueso	Charentais, Doral	7

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
22.	**VG**	**Young fruit: extension of darker area around peduncle**	**Jeune fruit: taille de la zone plus foncée autour du pédoncule**	**Junge Frucht: Ausdehnung der dunkleren Zone um den Stiel**	**Fruto joven: extensión del área más oscura alrededor del pedúnculo**		
QN	**(c)**	absent or very small	absente ou très petite	fehlend oder sehr klein	ausente o muy pequeña	Doral	1
		small	petite	klein	pequeña	Boule d'or	3
		medium	moyenne	mittel	media	Mirasol Geaprince	5
		large	large	groß	grande		7
23. **(+)**	**VG**	**Fruit: change of skin color from young fruit to maturity**	**Fruit: changement de couleur de l'épiderme du jeune fruit au fruit à maturité**	**Frucht: Änderung der Farbe der Schale von der jungen Frucht bis zur Reife**	**Fruto: cambio de color de la piel del fruto joven a la madurez**		
QN		early in fruit development	au début du développement du fruit	früh in der Fruchtentwicklung	a principios del desarrollo del fruto	Alpha, Charantais, Clipper	1
		late in fruit development	tardivement lors du développement du fruit	spät in der Fruchtentwicklung	a finales del desarrollo del fruto	Amarillo Oro, Galia	2
		very late in fruit development or no change	très tardivement lors du développement du fruit ou sans changement	sehr spät in der Fruchtentwicklung	muy al final del desarrollo del fruto o sin cambios	Futuro, Piel de Sapo	3
24. **(*)**	**VG/ MS**	**Fruit: length**	**Fruit: longueur**	**Frucht: Länge**	**Fruto: longitud**		
QN	**(d)**	very short	très court	sehr kurz	muy corto	Doublon, Golden Crispy	1
		short	court	kurz	corto	Topper, Védrantais	3
		medium	moyen	mittel	medio	Marina, Spanglia	5
		long	long	lang	largo	Categoría, Toledo	7
		very long	très long	sehr lang	muy largo	Katsura Giant, Valdivia	9

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
25. (*)	**VG/ MS**	**Fruit: diameter**	**Fruit: diamètre**	**Frucht: Durchmesser**	**Fruto: diámetro**		
QN	**(d)**	very narrow	très étroit	sehr klein	muy estrecho	Banana, Golden Crispy	1
		narrow	étroit	klein	estrecho	Alpha, Maestro	3
		medium	moyen	mittel	medio	Categoría, Galia	5
		broad	large	groß	ancho	Albino, Kinka	7
		very broad	très large	sehr groß	muy ancho	Noir des Carmes	9
26. (*)	**VG/ MS**	**Fruit: ratio length/diameter**	**Fruit: rapport longueur/diamètre**	**Frucht: Verhältnis Länge/Durchmesser**	**Fruto: relación longitud/diámetro**		
QN	**(d)**	very small	très petit	sehr klein	muy pequeña	Noir des Carmes	1
		very small to small	très petit à petit	sehr klein bis klein	muy pequeña a pequeña	Alpha, Arava	2
		small	petit	klein	pequeña	Buster, Supermarket	3
		small to medium	petit à moyen	klein bis mittel	pequeña a media	Aril, Edén	4
		medium	moyen	mittel	media	Doral, Tendral Negro	5
		medium to large	moyen à grand	mittel bis groß	media a grande	Sirocco, Verdol	6
		large	grand	groß	grande	Categoría, Futuro	7
		large to very large	grand à très grand	groß bis sehr groß	grande a muy grande	Iguana, Canador	8
		very large	très grand	sehr groß	muy grande	Banana	9
27. (*) (+)	**VG**	**Fruit: position of maximum diameter**	**Fruit: localisation du diamètre maximal**	**Frucht: Position des maximalen Durchmessers**	**Fruto: posición del diámetro máximo**		
QN	**(d)**	toward stem end	vers la base	zum Stielende hin	hacia la base del tallo	Piolín , Sapo de Oro	1
		at middle	au milieu	in der Mitte	en el medio	Piel de Sapo, Védrantais	2
		toward blossom end	vers le sommet	zum Blütenende hin	hacia el ápice	Cganchi, Edén, Katsura Giant	3

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
28. (*) (+)	**VG**	**Fruit: shape in longitudinal section**	**Fruit: forme en section longitudinale**	**Frucht: Form im Längsschnitt**	**Fruto: forma en sección longitudinal**		
PQ	**(d)**	ovate	ovale	eiförmig	oval	De Cavaillon, Piolín	1
		medium elliptic	elliptique moyen	mittel elliptisch	elíptica media	Piel de Sapo	2
		broad elliptic	elliptique large	breit elliptisch	elíptica ancha	Corin, Sardo	3
		circular	circulaire	rund	circular	Alpha, Galia	4
		quadrangular	rectangulaire	quadratisch	cuadrangular	Zatta	5
		oblate	aplati	breitrund	oblata	Jívaro, Noir de Carmes	6
		obovate	obovale	verkehrt eiförmig	oboval	Cganchi	7
		elongated	allongé	länglich	alargada	Alficoz, Banana	8
29. (*) (+)	**VG**	**Fruit: ground color of skin**	**Fruit: couleur de fond de l'épiderme**	**Frucht: Grundfarbe der Schale**	**Fruto: color de fondo de la piel**		
PQ	**(d)**	white	blanc	weiß	blanco	Albino, Honey Dew	1
		yellow	jaune	gelb	amarillo	Amarillo-Canario, Edén, Galia, Passport, Solarking	2
		green	vert	grün	verde	Gohyang, Piel de Sapo	3
		grey	gris	grau	gris	Geaprince, Geamar, Romeo, Sirio, Supporter, Védrantais	4
30.	**VG**	**Fruit: intensity of ground color of skin**	**Fruit: intensité de la couleur de fond de l'épiderme**	**Frucht: Intensität der Grundfarbe der Schale**	**Fruto: intensidad del color de fondo de la piel**		
QN	**(d)**	light	clair	hell	claro		3
		medium	moyen	mittel	medio		5
		dark	foncé	dunkel	oscuro		7

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
31. **(+)**	**VG**	**Fruit: hue of ground color of skin**	**Fruit: teinte de la couleur de fond de l'épiderme**	**Frucht: Grundfarbton der Schale**	**Fruto: tonalidad del color de fondo de la piel**		
PQ	**(d)**	absent or very weak	absente ou très faible	fehlend oder sehr gering	ausente o muy débil	Amarillo-Canario, Albino, Piel de Sapo, Sirio	1
		whitish	blanchâtre	weißlich	blanquecina	Romeo	2
		yellowish	jaunâtre	gelblich	amarillenta	Geaprince, Supporter	3
		orange	orange	orange	anaranjada	Edén	4
		ochre	ocre	ocker	ocre	Passport	5
		greenish	verdâtre	grünlich	verdosa	Geamar, Honey Dew, Solarking	6
		greyish	grisâtre	gräulich	grisácea	Gohyang	7
32.	**VG**	**Fruit: density of dots**	**Fruit: densité des points**	**Frucht: Dichte der Punkte**	**Fruto: densidad de los puntos**		
QN	**(d)**	absent or very sparse	nulle ou très lâche	fehlend oder sehr locker	ausente o muy baja	Charentais	1
		sparse	lâche	locker	baja		3
		medium	moyenne	mittel	media	Petit Gris de Rennes	5
		dense	forte	dicht	densa	Piel de Sapo	7
		very dense	très forte	sehr dicht	muy densa	Albino	9
33.	**VG**	**Fruit: size of dots**	**Fruit: taille des points**	**Frucht: Größe der Punkte**	**Fruto: tamaño de los puntos**		
QN	**(d)**	small	petits	klein	pequeño	Doral	3
		medium	moyens	mittel	medio	Toledo	5
		large	gros	groß	grande	Futuro	7

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
34.	**VG**	**Fruit: color of dots**	**Fruit: couleur des points**	**Frucht: Farbe der Punkte**	**Fruto: color de los puntos**		
PQ	**(d)**	white	blancs	weiß	blanco	Edén	1
		yellow	jaunes	gelb	amarillo	Piel de Sapo	2
		green	verts	grün	verde	Tendral Negro	3
35.	**VG**	**Fruit: intensity of color of dots**	**Fruit: intensité de la couleur des points**	**Frucht: Intensität der Farbe der Punkte**	**Fruto: intensidad del color de los puntos**		
QN	**(d)**	light	claire	hell	claro	Kinka, Mesol	3
		medium	moyenne	mittel	medio	Sapiel, Toledo	5
		dark	foncée	dunkel	oscuro	Soprano, Víctor	7
36. (*)	**VG**	**Fruit: density of patches**	**Fruit: densité des taches**	**Frucht: Dichte der Flecken**	**Fruto: densidad de las manchas**		
QN	**(d)**	absent or very sparse	nulle ou très lâche	fehlend oder sehr locker	ausente o muy baja	Rochet	1
		sparse	lâche	locker	baja		3
		medium	moyenne	mittel	media	Braco	5
		dense	dense	dicht	densa	Piel de Sapo	7
		very dense	très dense	sehr dicht	muy densa	Oranje Ananas	9
37.	**VG**	**Fruit: size of patches**	**Fruit: taille des taches**	**Frucht: Größe der Flecken**	**Fruto: tamaño de las manchas**		
QN	**(d)**	small	petites	klein	pequeño	Baltasar	3
		medium	moyennes	mittel	medio	Sancho	5
		large	grosses	groß	grande	Taurus	7
38. (*)	**VG**	**Fruit: warts**	**Fruit: verrues**	**Frucht: Warzen**	**Fruto: verrugas**		
QL	**(d)**	absent	absentes	fehlend	ausentes	Piel de Sapo	1
		present	présentes	vorhanden	presentes	Zatta	9

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
39. (*)	**VG**	**Fruit: strength of attachment of peduncle at maturity**	**Fruit: fermeté de la fixation du pédoncule à maturité**	**Frucht: Festigkeit des Anhaftens des Stiels bei Reife**	**Fruto: firmeza de la adherencia del pedúnculo en la madurez**		
QN	**(d)**	very weak	très faible	sehr gering	muy débil	Edén	1
		weak	faible	gering	débil	Arava, Maestro	3
		medium	moyenne	mittel	medio	Doral, Védrantais	5
		strong	forte	stark	fuerte	Clipper, Costa	7
		very strong	très forte	sehr stark	muy fuerte	Daimiel, Eloro	9
40. (*) (+)	**VG**	**Fruit: shape of base**	**Fruit: forme de la base**	**Frucht: Form der Basis**	**Fruto: forma de la base**		
PQ	**(d)**	pointed	pointue	spitz	puntiaguda	Edén	1
		rounded	arrondie	abgerundet	redondeada	Arava	2
		truncate	tronquée	abgeflacht	truncada	Zatta	3
41. (*) (+)	**VG**	**Fruit: shape of apex**	**Fruit: forme du sommet**	**Frucht: Form der Spitze**	**Fruto: forma del ápice**		
PQ	**(d)**	pointed	pointue	spitz	puntiagudo	Canador, Futuro	1
		rounded	arrondie	abgerundet	redondeado	Alpha, Honey Dew	2
		truncate	tronquée	abgeflacht	truncado	Noir des Carmes	3
42. (*)	**VG**	**Fruit: size of pistil scar**	**Fruit: taille de l'attache pistillaire**	**Frucht: Größe der Griffelnarbe**	**Fruto: forma del tamaño de la cicatriz pistilar**		
QN	**(d)**	small	petite	klein	pequeña	Alpha, Categoría	3
		medium	moyenne	mittel	media	Charentais, Eros, Verdol	5
		large	grande	groß	grande	Drake, Supermarket	7

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
43. (*)	**VG**	**Fruit: grooves**	**Fruit: sillons**	**Frucht: Furchen**	**Fruto: surcos**		
QL	**(d)**	absent or very weakly expressed	absents ou très faiblement exprimés	fehlend oder sehr schwach ausgeprägt	ausentes o muy débilmente definidos	Piel de Sapo, Arava	1
		weakly expressed	faiblement exprimés	schwach ausgeprägt	débilmente definidos	Total, Hobby	2
		strongly expressed	fortement exprimés	stark ausgeprägt	fuertemente definidos	Védrantais, Galia	3
44.	**VG**	**Fruit: width of grooves**	**Fruit: largeur des sillons**	**Frucht: Breite der Furchen**	**Fruto: anchura de los surcos**		
QN	**(d)**	narrow	étroits	schmal	estrecho	Auraprince	3
		medium	moyens	mittel	medios	Biga	5
		broad	larges	breit	anchos	Nembo, Sirio	7
45.	**VG**	**Fruit: depth of grooves**	**Fruit: profondeur des sillons**	**Frucht: Tiefe der Furchen**	**Fruto: profundidad de los surcos**		
QN	**(d)**	very shallow	très peu profonds	sehr flach	muy superficial	Amber	1
		shallow	peu profonds	flach	superficial	Galia	3
		medium	moyens	mittel	media	Alpha	5
		deep	profonds	tief	profunda	Panamá, Supermarket	7
		very deep	très profonds	sehr tief	muy profunda	Noir des Carmes, Sucrin de Tours	9
46.	**VG**	**Fruit: color of grooves**	**Fruit: couleur des sillons**	**Farbe der Furchen**	**Fruto: color de los surcos**		
PQ	**(d)**	white	blancs	weiß	blanco	Geumssaraki	1
		yellow	jaunes	gelb	amarillo	Futuro, Galia	2
		green	verts	grün	verde	Charentais	3

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
47. (*) (+)	**VG**	**Fruit: creasing of surface**	**Fruit: aspect ridé de la surface**	**Frucht: Faltenbildung der Oberfläche**	**Fruto: rugosida de la superficie**		
QN	**(d)**	absent or very weak	absent ou très faible	fehlend oder sehr gering	ausente o muy débil	Védrantais	1
		weak	faible	gering	débil	Melchor, Sirocco	3
		medium	moyen	mittel	medio	Costa, Piolín	5
		strong	fort	stark	fuerte	Tendral Negro	7
		very strong	très fort	sehr stark	muy fuerte	Balbey, Kirkagac	9
48. (*)	**VG**	**Fruit: cork formation**	**Fruit: broderie**	**Frucht: Korkbildung**	**Fruto: formación suberosa**		
QL	**(d)**	absent	absente	fehlend	ausente	Alpha	1
		present	présente	vorhanden	presente	Dalton	9
49. (*)	**VG**	**Fruit: thickness of cork layer**	**Fruit: épaisseur de la broderie**	**Frucht: Dicke der Korkschicht**	**Fruto: grosor de la capa suberosa**		
QN	**(d)**	very thin	très fine	sehr dünn	muy delgado	Amarillo Oro	1
		thin	fine	dünn	delgado	Riosol, Védrantais	3
		medium	moyenne	mittel	medio	Marina	5
		thick	épaisse	dick	grueso	Geamar, PMR 45	7
		very thick	très épaisse	sehr dick	muy grueso	Honey Rock, Perlita	9
50. (*)	**VG**	**Fruit: pattern of cork formation**	**Fruit: répartition de la broderie**	**Frucht: Muster der Korkbildung**	**Fruto: distribución de la formación suberosa**		
PQ	**(d)**	dots only	ponctuelle seulement	nur punktförmig	únicamente en puntos	Hermes, Védrantais	1
		dots and linear	ponctuelle et linéaire	punktförmig und linear	en puntos y lineal	Jívaro, Topper	2
		linear only	linéaire seulement	nur linear	únicamente lineal	Futuro, Riosol	3
		linear and netted	linéaire et en résille	linear und netzförmig	lineal y reticulada	Anatol, Chantal	4
		netted only	en résille seulement	nur netzförmig	únicamente reticulada	Galia, Perlita	5

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
51. (*)	**VG**	**Fruit: density of pattern of cork formation**	**Fruit: densité de la broderie**	**Frucht: Dichte des Musters der Korkbildung**	**Fruto: densidad de la distribución de la formación suberosa**		
QN	**(d)**	very sparse	très lâche	sehr locker	muy baja	Alpha, Amarillo Oro	1
		sparse	lâche	locker	baja	Védrantais	3
		medium	moyenne	mittel	media	Regal, Vital	5
		dense	compacte	dicht	densa	Galia, Geamar	7
		very dense	très compacte	sehr dicht	muy densa	Honey Rock, Perlita	9
52. (+)	**VG**	**Fruit: rate of change of skin color from maturity to over maturity**	**Fruit: taux de changement de couleur de l'épiderme de la maturité à la surmaturité**	**Frucht: Änderung der Farbe der Schale von der Reife bis zur Überreife**	**Fruto: tasa de cambio de color de la piel de la madurez a la sobremadurez**		
QN		absent or very slow	nul ou très lent	fehlend oder sehr langsam	ausente o muy lento	Clipper, Doral, Galia, Honey dew, Piel de Sapo	1
		slow	lent	langsam	lento	Goloso	3
		medium	moyen	mittel	medio	Futuro, Vendôme Dulcinea	5
		fast	rapide	schnell	rápido	Corin, Marina, Nembo	7
53. (+)	**VG**	**Fruit: width of flesh in longitudinal section (at position of maximum fruit diameter)**	**Fruit: épaisseur maximale de la chair en section longitudinale (à la position du diamètre du fruit maximal)**	**Frucht: Maximale Breite des Fleisches im Längsschnitt (in der Position des maximalen Fruchtdurchmessers**	**Fruto: anchura máxima de la pulpa en sección longitudinal (en posición del diámetro del fruto máximo)**		
QN	**(d)**	thin	mince	dünn	delgada	Gama	3
		medium	moyenne	mittel	media	Toledo	5
		thick	épaisse	dick	gruesa	Tito	7

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
54. (*)	**VG**	**Fruit: main color of flesh**	**Fruit: couleur principale de la chair**	**Frucht: Hauptfarbe des Fleisches**	**Fruto: color principal de la pulpa**		
PQ	**(d)**	white	blanche	weiß	blanco	Piel de Sapo	1
		greenish white	blanche verdâtre	grünlichweiß	blanco verdoso	Galia	2
		green	verte	grün	verde	Radical	3
		yellowish white	blanche jaunâtre	gelblichweiß	blanco amarillento	Guaraní	4
		orange	orange	orange	anaranjada	Védrantais	5
		reddish orange	orange rougeâtre	rötlichorange	naranja rojizo	Magenta	6
55.	**VG**	**Only varieties with main color of flesh: orange: Fruit: intensity of orange color of flesh**	**Seulement les variétés à couleur principale de la chair: orange: Fruit: intensité de la couleur orange de la chair**	**Nur Sorten mit Hauptfarbe des Fleisches: orange: Frucht: Intensität der Orangefärbung des Fleisches**	**Únicamente variedades con color principal de la pulpa anaranjada: Fruto: intensidad del color anaranjado de la pulpa**		
QN	**(d)**	light	clair	hell	claro	Fantasy, Oloroso	3
		medium	moyen	mittel	medio	Lunasol	5
		dark	foncé	dunkel	oscuro	Geamar	7
56.	**VG**	**Only varieties with main color of flesh: white; greenish white; green; yellowish white: Fruit: secondary salmon coloring of flesh**	**Seulement les variétés à couleur principale de la chair: blanche; blanche verdâtre; verte; blanche jaunâtre: Fruit: coloration secondaire saumon de la chair**	**Nur Sorten mit Hauptfarbe des Fleisches: weiß; grünlichweiß; grün; gelblichweiß: Frucht: sekundäre Lachsfärbung des Fleisches**	**Únicamente variedades con color principal de la pulpa: blanco; blanco verdoso; verde; blanco amarillento: Fruto: coloración secundaria de la pulpa de color salmón**		
QN	**(d)**	absent or very weak	absente ou très faible	fehlend oder sehr gering	ausente o muy débil	Gustal	1
		weak	faible	gering	débil	Floraprince, Toledo	3
		medium	moyenne	mittel	media	Arizo, Eloro	5
		strong	forte	stark	fuerte		7

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
57. **(+)**	**VG**	**Fruit: firmness of flesh**	**Fruit: fermeté de la chair**	**Frucht: Festigkeit des Fleisches**	**Fruto: firmeza de la pulpa**		
QN	**(d)**	soft	molle	weich	blanda	Galia, Marina	3
		medium	moyenne	mittel	media	Sancho, Supporter	5
		firm	ferme	fest	firme	Braco, Geamar	7
58.	**VG**	**Only varieties with change of skin color from maturity to over maturity: Fruit at over maturity: hue of color of skin**	**Seulement les variétés à changement de couleur d'épiderme de la maturité à la surmaturité: Fruit à la surmaturité: teinte de couleur de l'épiderme**	**Nur Sorten mit Änderung der Farbe der Schale von der Reife bis zur Überreife: Frucht bei Überreife: Farbton der Schale**	**Únicamente variedades con cambio de color de la piel de la madurez a la sobremadurez: Fruto en la sobremadurez: tonalidad del color de la piel**		
PQ		yellow	jaune	gelb	amarillo	Futuro, Marina	1
		orangish yellow	jaune orangé	hell orangegelb	amarillo anaranjado	Drake, Gama	2
		creamish	crème	hell cremefarben	cremoso	Figaro, Vendôme	3
59.	**VG**	**Only varieties with change of skin color from maturity to over maturity and with yellow or orangish yellow color of skin: Fruit at over maturity: intensity of yellow color of skin**	**Seulement les variétés à changement de couleur de l'épiderme de la maturité à la surmaturité et avec une couleur d'épiderme jaune ou jaune orangé: Fruit à la surmaturité: intensité de la couleur jaune de l'épiderme**	**Nur Sorten mit Änderung der Farbe der Schale von der Reife bis zur Überreife und mit gelber oder hell orangegelber Farbe der Schale: Frucht bei Überreife: Intensität der Gelbfärbung der Schale**	**Únicamente variedades con cambio de color de la piel de la madurez a la sobremadurez y con el color de la piel amarillo o amarillo anaranjado: Fruto en la sobremadurez: intensidad del color amarillo de la piel**		
QN		light	clair	hell	claro	Dulcinea	3
		medium	moyen	mittel	medio	Futuro	5
		dark	foncé	dunkel	oscuro	Trapío	7

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
60. (*)	**MS**	**Seed: length**	**Graine: longueur**	**Samen: Länge**	**Semilla: longitud**		
QN	**(e)**	very short	très courte	sehr kurz	muy corta	Geumssaraki, Golden Crispi	1
		short	courte	kurz	corta	Elario, Katsura Giant	3
		medium	moyenne	mittel	media	Arava, Sancho	5
		long	longue	lang	larga	Amarillo Oro, Toledo	7
		very long	très longue	sehr lang	muy larga	Albino	9
61.	**MS**	**Seed: width**	**Graine: largeur**	**Samen: Breite**	**Semilla: anchura**		
QN	**(e)**	very narrow	très étroite	sehr schmal	muy estrecha	Golden Crispi	1
		narrow	étroite	schmal	estrecha	Aurabel	3
		medium	moyenne	mittel	media	Arava, Sancho	5
		broad	large	breit	amplia	Amarillo Oro	7
		very broad	très large	sehr breit	muy amplia	Ronda	9
62.	**VG**	**Seed: shape**	**Graine: forme**	**Samen: Form**	**Semilla: forma**		
(+)							
QL	**(e)**	not pine-nut shape	pas en forme de pigne de pin	nicht zirbelnußförmig	no apiñonada	Toledo	1
		pine-nut shape	en forme de pigne de pin	zirbelnußförmig	apiñonada	Piel de Sapo	2
63. (*)	**VG**	**Seed: color**	**Graine: couleur**	**Samen: Farbe**	**Semilla: color**		
QL	**(e)**	whitish	blanchâtre	weißlich	blanquecino	Amarillo Oro s.b.	1
		cream yellow	crème	cremefarben gelb	crema amarillento	Galia, Piel de Sapo	2

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
64.	**VG**	**Only varieties with cream yellow seed color: Seed: intensity of color**	**Seulement les variétés à couleur de graine crème: Graine: intensité de la couleur**	**Nur Sorten mit cremefarben gelben Samen: Samen: Intensität der Farbe**	**Únicamente variedades con el color de semilla crema amarillento: Semilla: intensidad del color**		
QN	**(e)**	light	claire	hell	clara	Goldgen	3
		medium	moyenne	mittel	media	Galia	5
		dark	foncée	dunkel	oscura	Doral	7
65.	**MG**	**Time of male flowering**	**Époque de floraison mâle**	**Zeitpunkt der männlichen Blüte**	**Época de floración masculina**		
QN		early	précoce	früh	temprana	Clipper, Vital	3
		medium	moyenne	mittel	media	Categoría	5
		late	tardive	spät	tardía	Nicolás, Rocín	7
66.	**MG**	**Time of female flowering**	**Époque de floraison femelle**	**Zeitpunkt der weiblichen Blüte**	**Época de floración femenina**		
QN		early	précoce	früh	temprana	Clipper	3
		medium	moyenne	mittel	media	Braco, Categoría, Vital	5
		late	tardive	spät	tardía	Nicolás	7
67.	**MG**	**Time of ripening**	**Époque de maturité**	**Zeitpunkt der Reife**	**Época de maduración**		
QN		very early	très précoce	sehr früh	muy temprana	Goldstar, Sun	1
		early	précoce	früh	temprana	Galia	3
		medium	moyenne	mittel	media	Védrantais	5
		late	tardive	spät	tardía	Pinonet Piel de Sapo, Rochet	7
		very late	très tardive	sehr spät	muy tardía	Clipper, Supporter, Tendral	9

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
68. (*) (+)	**MG**	**Shelf life of fruit**	**Durée de conservation du fruit sur l'étalage**	**Haltbarkeitsdauer der Frucht**	**Conservación post cosecha del fruto**		
QN		very short	très courte	sehr kurz	muy breve	Charentais	1
		short	courte	kurz	breve	Galia	3
		medium	moyenne	mittel	media	Clipper	5
		long	longue	lang	larga	Piel de Sapo	7
		very long	très longue	sehr lang	muy larga	Tendral Negro	9
69. (+)	**VG**	**Resistance to *Fusarium oxysporum* f. sp. *melonis***	**Résistance à *Fusarium oxysporum* f. sp. *melonis***	**Resistenz gegen *Fusarium oxysporum* f. sp. *melonis***	**Resistencia al *Fusarium oxysporum* f. sp. *melonis***		
QL		---	---	---	---	---	---
69.1		**Race 0**	**Pathotype 0**	**Pathotyp 0**	**Raza 0**		
		absent	absente	fehlend	ausente	Jaune Canari 2	1
		present	présente	vorhanden	presente	Jador, Joker, Védrantais	9
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69.2		**Race 1**	**Pathotype 1**	**Pathotyp 1**	**Raza 1**		
		absent	absente	fehlend	ausente	Jaune Canari 2, Védrantais	1
		present	présente	vorhanden	presente	Jador, Joker	9
		---	---	---	---	---	---
69.3		**Race 2**	**Pathotype 2**	**Pathotyp 2**	**Raza 2**		
		absent	absente	fehlend	ausente	Jaune Canari 2, Joker	1
		present	présente	vorhanden	presente	Jador, Védrantais	9

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
69.4		**Race 1-2**	**Pathotype 1-2**	**Pathotyp 1-2**	**Raza 1-2**		
(+)							
		absent	absente	fehlend	ausente	Jaune Canari 2 Joker, Védrantais	1
		present	présente	vorhanden	presente	Jador	9
70.	**VG**	**Resistance to *Sphaerotheca fuliginea (Podosphaera xanthii)* (Powdery mildew)**	**Résistance à *Sphaerotheca fuliginea (Podosphaera xanthii)* (oïdium)**	**Resistenz gegen *Sphaerotheca fuliginea (Podosphaera xanthii* (Echter Mehltau)**	**Resistencia a *Sphaerotheca fuliginea (Podosphaera xanthii)* (Oidio)**		
(+)							
QN							
		---	---	---	---	---	---
70.1		**Race 1**	**Pathotype 1**	**Pathotyp 1**	**Raza 1**		
		susceptible	sensible	anfällig	susceptible	Alpha, Boneto, Delta, Jerac	1
		moderately resistant	moyennement résistant	mäßig resistent	moderadamente resistente	Escrito	2
		highly resistant	hautement résistant	hochresistent	altamente resistente	Cézanne, Anasta, Théo	3
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70.2		**Race 2**	**Pathotype 2**	**Pathotyp 2**	**Raza 2**		
		susceptible	sensible	anfällig	susceptible	Boneto, Galoubet	1
		moderately resistant	moyennement résistant	mäßig resistent	moderadamente resistente	Flores, Enzo, Escrito	2
		highly resistant	hautement résistant	hochresistent	altamente resistente	Anasta, Cézanne, Théo	3
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		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
70.3		**Race 5**	**Pathotype 5**	**Pathotyp 5**	**Raza 5**		
		susceptible	sensible	anfällig	susceptible	Védrantais	1
		moderately resistant	moyennement résistant	mäßig resistent	moderadamente resistente	Enzo, Flores	2
		highly resistant	hautement résistant	hochresistent	altamente resistente	Gaetano, Lucas, Théo	3
71. **(+)**	**VG**	**Resistance to *Erysiphe cichoracearum (Golovinomyces cichoracearum)* Race 1 (Powdery mildew)**	**Résistance à *Erysiphe cichoracearum (Golovinomyces cichoracearum)* Pathotype 1 (oïdium)**	**Resistenz gegen *Erysiphe cichoracearum (Golovinomyces cichoracearum)* Pathotyp 1 (Echter Mehltau)**	**Resistencia a *Erysiphe cichoracearum (Golovinomyces cichoracearum)* Raza 1 (Oidio)**		
QN		susceptible	sensible	anfällig	susceptible	Bastion, Boneto	1
		moderately resistant	moyennement résistant	mäßig resistent	moderadamente resistente	Flores, Anasta	2
		highly resistant	hautement résistant	hochresistent	altamente resistente	Cézanne, Heliobel, Théo	3
72. **(+)**	**VG**	**Resistance to colonization by *Aphis gossypii***	**Résistance à la colonisation par *Aphis gossypii***	**Resistenz gegen Befall durch *Aphis gossypii***	**Resistencia a la colonización por *Aphis gossypii***		
QL		absent	absente	fehlend	ausente	Charentais	1
		present	présente	vorhanden	presente	AR, Margot, Top Mark	9
73. **(+)**	**VG**	**Resistance to Zucchini Yellow Mosaic Virus (ZYMV) Race F**	**Résistance au virus de la mosaïque jaune de la courgette (ZYMV) Pathotype F**	**Resistenz gegen Zucchinigelb-mosaikvirus (ZYMV), Pathotyp F**	**Resistencia al virus del mosaico amarillo del calabacín (ZYMV) Raza F**		
QL		absent	absente	fehlend	ausente	Alpha, Boule d'Or, Cantor, Doublon	1
		present	présente	vorhanden	presente	Eloro, Hermes, Védrantais	9

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
74. **(+)**	**VG**	**Resistance to Papaya Ring Spot Virus (PRSV)**	**Résistance au virus des taches annulaires du papayer**	**Resistenz gegen Papayaringflecken-virus (PRSV)**	**Resistencia al virus de la mancha anular del papayo (PRSV)**		
QL		---	---	---	---	---	---
74.1		**Race GVA**	**Pathotype GVA**	**Pathotyp GVA**	**Raza GVA**		
		absent	absente	fehlend	ausente	Védrantais	1
		present	présente	vorhanden	presente	WMRV 29, 72025	9
		---	---	---	---	---	---
74.2		**Race E_2**	**Pathotype E_2**	**Pathotyp E_2**	**Raza E_2**		
		absent	absente	fehlend	ausente	Védrantais, 72025	1
		present	présente	vorhanden	presente	WMRV 29	9
75. **(+)**	**VG**	**Resistance to Muskmelon Necrotic Spot Virus (MNSV) Race E_8**	**Résistance au virus de la criblure du melon (MNSV) Pathotype E_8**	**Resistenz gegen Netzmelonen-nekrosefleckenvirus (MNSV), Pathotyp E_8**	**Resistencia al virus del cribado del melón (MNSV) Raza E_8**		
QL		absent	absente	fehlend	ausente	Védrantais	1
		present	présente	vorhanden	presente	Primal, VA 435	9
76. **(+)**	**VG**	**Resistance to Cucumber Mosaic Virus (CMV)**	**Résistance au virus de la mosaïque du concombre (CMV)**	**Resistenz gegen Gurkenmosaikvirus (CMV)**	**Resistencia al virus del mosaico del pepino (CMV)**		
QL		absent	absente	fehlend	ausente	Cézanne, Dalton	1
		present	présente	vorhanden	presente	Lunaduke	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) Seedling: All observations on the seedling should be made just before the development of the first true leaf.

(b) Leaf blade: Unless otherwise indicated, all observations on the leaf blade, should be made on fully developed but not old leaves, preferably between the 5th and 8th node when the plant has at least 11 nodes.

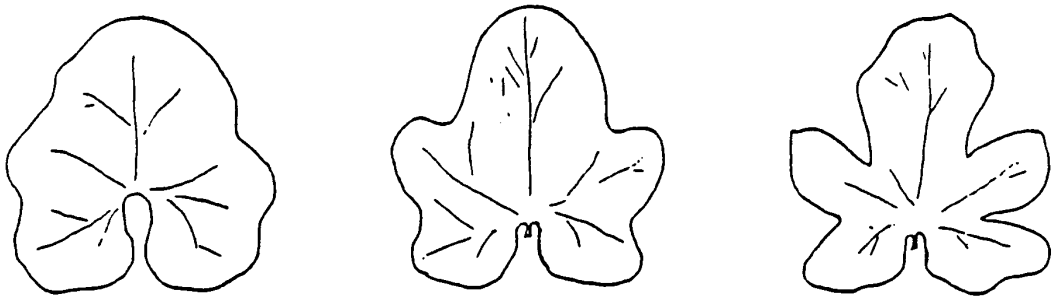
(c) Young fruit: All observations on the young fruit should be made on green, unripe fruits, before the color change. For most varieties this means when the fruit is half the final size. To facilitate the observation, it is recommended to harvest one young fruit per plant, if the number of fruits per plant makes that possible.

(d) Fruit: Observations which should be made on ripened fruit. The color must not start to change to the over maturity color. When appropriate, for the flesh characteristics it is recommended to wait at least one week after the harvest before opening the fruits.

(e) Seed: All observations on the seed should be made on fully developed and dry seeds, after washing and drying in the shade.

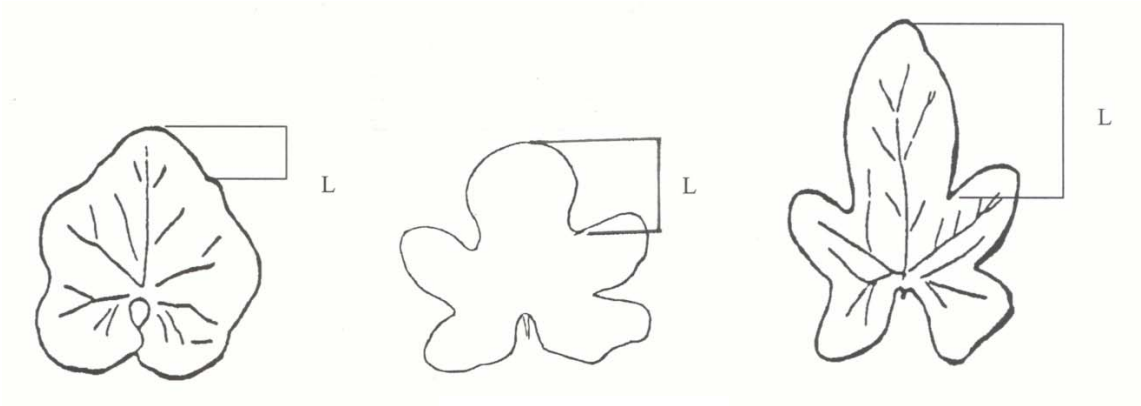
8.2 Explanations for individual characteristics

Ad. 6: Leaf blade: development of lobes



3	5	7
weak	medium	strong

Ad. 7: Leaf blade: length of terminal lobe



3	5	7
short	medium	long

Ad. 13: Young fruit: hue of green color of skin

The basic color of the young fruit is green. There are two true hue levels “yellowish” and “green” depending on the proportion between red and blue components in the color, and two other hue levels “greyish” that is rather a low saturation of the green color and “whitish” that results from a very light intensity of the green color.

Ad. 23: Fruit: change of skin color from young fruit to maturity
Ad. 52: Fruit: Rate of change of skin color from maturity to over maturity

The melon fruit may have up to three different skin colors in the course of its development. The speed of evolution of the color depends on the type of variety, but within a type different speeds can also be observed. Please note that in cases where the color change is closely linked to maturity, the observation should be clear: either on the color change related to maturity (characteristic 23) or within mature fruits from mature to over mature (characteristic 53). The changing of fruit skin color can be described by using the following characteristics:

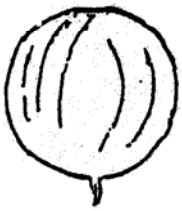
1. Stage 1: color of the young fruit (green color)
2. Change from Stage 1 to Stage 2 (Characteristics 23)
3. Stage 2: color at maturity
4. Change from Stage 2 to Stage 3 (Characteristic 53)
5. Stage 3: color at over maturity.

Some examples are given in the following table:

Variety	Stage 1: color of the young fruit	Change from Stage 1 to Stage 2 (Ch. 23)	Stage 2: color at maturity (Ch. 29)	Change from Stage 2 to Stage 3 (Ch. 53)	Stage 3: color at over maturity
Galia	green	late	yellow	absent	yellow
Amarillo Oro	green	late	yellow	absent	yellow
Doral	green	late	yellow	absent	yellow
Charentais	green	early	grey	fast	yellow
Alpha	green	early	grey	medium	yellow
Clipper	green	early	grey	absent	grey
Vendome	green	early	grey	medium	yellow
Corin	green	early	grey	fast	yellow
Nembo	green	early	grey	fast	yellow
Albino	green	late	white	absent	white
Honey Dew	green	late	white	absent	white
Dulcinea	green	late	white	medium	yellow
Marina	green	no-change	green	fast	yellow
Futuro	green	no change	green	medium	yellow
Goloso	green	no change	green	slow	yellow
Piel de Sapo	green	no change	green	absent	green

Ad. 27: Fruit: position of maximum diameter

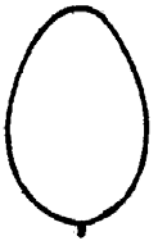
1
toward stem end



2
at middle

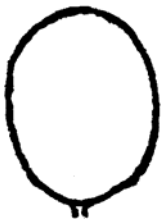
3
toward blossom end

Ad. 28: Fruit: shape in longitudinal section

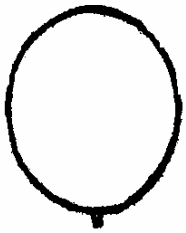


1
ovate

2
medium elliptic

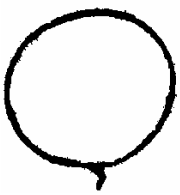


3
broad elliptic



4
circular

5
quadrangular



6
oblate

7
obovate

8
elongated

Ad. 29: Fruit: ground color of skin
Ad. 31: Fruit: hue of ground color of skin

For example:

All the Galia type would be considered as yellow color. Hues ochre, orange, pure yellow or greenish can be considered in the group, but in a separate characteristic (31).

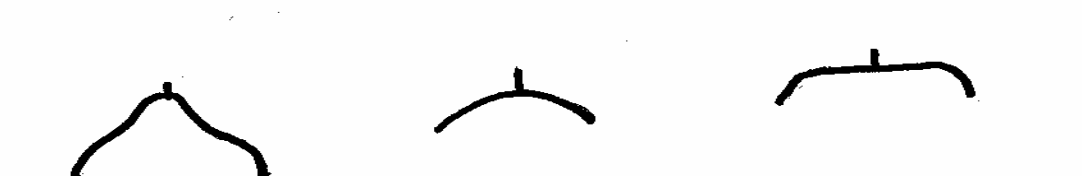
All the Charentais type would be considered as grey. Greenish, whitish, or yellowish hues (characteristic 31) can be used for distinctness, but are not recommended for grouping.

Ochre is pale brownish yellow.

The colors given below indicate the ground color of skin of the variety in question.

		Hue of ground color (characteristic 31)	
Example variety	Ground color (characteristic 29)	State	Note
Amarillo-Canario	yellow	absent or very weak	1
Albino	white	absent or very weak	1
Piel de Sapo	green	absent or very weak	1
Sirio	grey	absent or very weak	1
Romeo	grey	whitish	2
Geaprince	grey	yellowish	3
Supporter	grey	yellowish	3
Edén	yellow	orange	4
Passport	yellow	ocre	5
Geamar	grey	greenish	6
Honey Dew	white	greenish	6
Solarking	yellow	greenish	6
Gohyang	green	greyish	7

Ad. 40: Fruit: shape of base

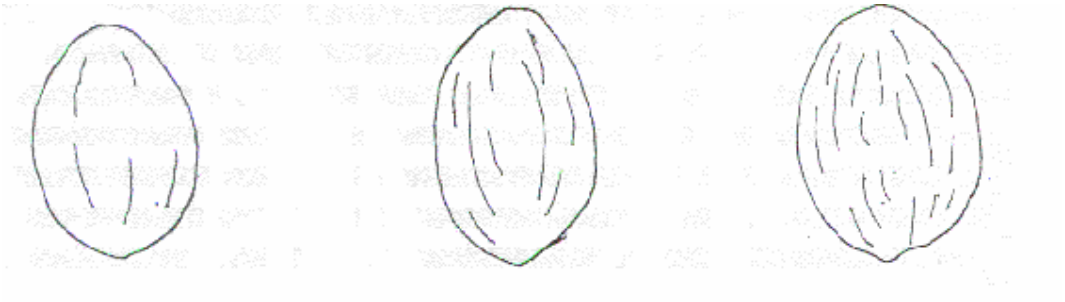


1 pointed | 2 rounded | 3 truncate

Ad. 41: Fruit shape of apex

1 pointed | 2 rounded | 3 truncate

Ad. 47: Fruit: creasing of surface

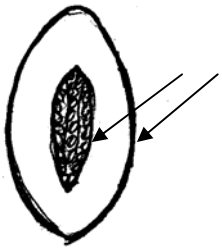


3 weak | 5 medium | 7 strong

Ad. 52: Fruit: Rate of change of skin color from maturity to over maturity

See Ad. 23, Ad. 52

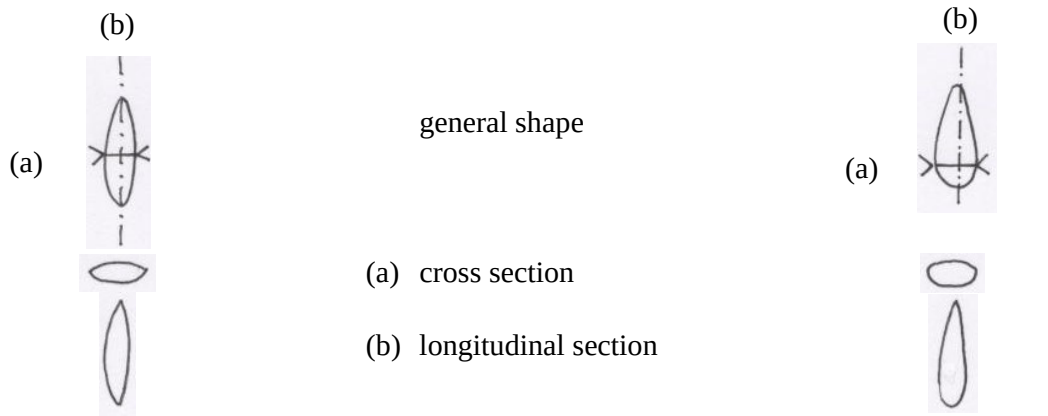
Ad. 53: Fruit: width of flesh in longitudinal section (at position of maximum fruit diameter)



Ad. 57: Firmness of flesh

Firmness of the flesh should be assessed in the central third of the fruit. The assement can be made by pressing the flesh with the blunt end of a pencil, or similar instrument, midway between the skin and the mucilage.

Ad. 62: Seed: shape



1
not pine-nut shape

2
pine-nut shape

Pine-nut shape seed (Piñonet) is controlled by a recessive characteristic with simple genetic regulation. Seed with pine-nut shape resembles the shape of a pine nut and has the following features:

the hilum end is slightly more pointed, with very small wings;
the apical end has a tendency to be more rounded;
in cross section the seed has a tendency to be more symmetrically elliptical;
the surface is not covered with arista.

Ad. 68: Shelf life of fruit

Shelf life is the time that the fruit remains firm in storage.

Five fruits per plot are stored in boxes in single layers. The boxes can be stored one on top on another if air can circulate between them. The storage area does not need to be climatically controlled, but must have naturally good conditions for storing fruits.

Observations are made at regular intervals of 3 to 4 days, noting the firmness of fruits, taking care not to damage them, and removing those which are damaged or rotten. The observation is to determine when the fruits become soft, i.e. when the firmness of the fruit becomes equal or lower than Note 3 "soft" in characteristic 57.

Ads. 69.1 - 69.3: Resistance to *Fusarium oxysporum* f. sp. *melonis*, races 0, 1 and 2

Maintenance of races

Type of medium:	on agar medium at 22 to 25°C
Special conditions:	transplantation of races each month

Execution of test

Growth stage of plants:	cotyledons expanded
Temperature:	24°C during day, 18°C during night
Light:	10 - 12 hours per day
Growing method:	Petri dishes in climatic chambers
Method of inoculation:	soaking of the root system in a suspension of liquid medium of fungus
Duration of test	
- from sowing to inoculation:	10-15 days
- from inoculation to reading:	20 days, death of susceptible plants
Number of plants tested:	30 plants
Remarks:	plants raised and transplanted in sterilized sand, irrigation with nutrient solution

Ad. 69.4: Resistance to *Fusarium oxysporum* f. sp. *melonis*, race 1-2

Maintenance of races

Type of medium:	on agar medium at 22 to 25°C
Special conditions:	transplantation of races each month

Execution of test

Growth stage of plants:	cotyledons expanded
Temperature:	24°C during day, 18°C during night
Light:	12 hours per day
Growing method:	dishes in climatic chambers

Method of inoculation:	absorption of 700 ml of a very diluted (30 to 50 times) fungus culture
Duration of test	
- from sowing to inoculation:	10 to 15 days
- from inoculation to reading:	3 weeks, until the death of the susceptible control
Number of plants tested:	30 plants
Remarks:	a moderately aggressive type of race 1-2 should be used as this is likely to show the difference between the presence and absence of resistance most clearly.

Ads. 70.1 to 70.3: Resistance to *Sphaerotheca fuliginea (Podosphaera xanthii)*, races 1, 2 and 5
Ad. 71: Resistance to *Erysiphe cichoracearum (Golovinomyces cichoracearum)*, race 1

1. Inoculum

Production of cotyledons

Cotyledons to be inoculated and tested: sow the seed in disinfected peat inside a closed mini glasshouse. When the cotyledons have expanded, remove them from the plant.

Desinfect the cotyledons by soaking them for 3 minutes in a mercuric chloride solution (0.05%). Rinse them twice with sterilized water. Dry the cotyledons with sterile paper towel, then place them in Petri dishes with the following medium:

sucrose	10 g
mannitol	20 g
agar	5 g
distilled water	1 liter

Propagation of the strains

Scatter conidia on the cotyledons and blow them. Incube the inoculated cotyledons in Petri dishes at 23°C during 14 hours in the light and at 18°C during 10 hours in the dark.

9 to 11 days after the inoculation, the cotyledons will be covered with spores and can be used as an inoculum.

Maintenance of races

Type of medium:	on inoculated cotyledons
Special conditions:	17°C, under very low light intensity. Maximum storage time is 1 to 1.5 months, after the inoculation.

2. Execution of Test

Inoculation on leaf disks (to be used as routine method)

Leaf disks, 2 cm in diameter, are taken from young plants and placed in polystyrene boxes (180 x 125 mm, 54 leaf disks per box) on a medium (mannitol 40g/l, benzamidazole 30 mg/l, agar 4 g/l). The leaf disks are inoculated by placing the boxes at the base of an inoculation tower (height: 1.00 m, diameter 0.25 m).

A cotyledon, already covered with inoculum, is placed on the top of the tower and blown with a Pasteur pipette to detach spores. Wait 1 to 2 minutes so that the conidia fall down through the tower onto the leaf discs. The leaf disks are kept for 24 hours in the dark by covering the boxes with a black polyethylene sheet. The boxes are then placed in a climatised chamber (20°C in the light for 14 hours; 24°C in the dark, for 10 hours per day).

Duration of test/Number of plants

- from inoculation to reading: 10 days
- number of plants tested: 5

Scoring

Strongly resistant varieties (Note 3)
0 no development of the fungi
1 isolated colonies (less than 10% of the disk surface)
Moderately resistant varieties (especially for *Erysiphe cichoracearum (Golovinomyces cichoracearum)) (Note 2)*
2 isolated colonies (more than 10 % of the disk surface)
3 all the disk surface is covered with weak sporulation
Susceptible varieties (Note 1)
4 sporulation on all the disk surface
5 intense sporulation

Inoculation on young plants (to be used as a complementary method to the disk method, if necessary)

Take spores from a cotyledon already covered with conidia and deposit them on a leaf taken from a young plant. You can also proceed by blowing the spores from a cotyledon by the method mentioned above.

Scoring

Strongly resistant varieties (Note 3)
0 no development of the fungi
1 isolated colonies (less than 10% of the leaves)
Moderately resistant varieties (especially for *Erysiphe cichoracearum (Golovinomyces cichoracearum)) (Note 2)*
3 isolated colonies (more than 10% of the leaves)
5 weak sporulation
Susceptible varieties (Note 1)
7 medium sporulation
9 intense sporulation

3. Host differentials

	***Sphaerotheca fuliginea* (*Podosphaera xanthii*)**					***Erysiphe cichoracearum* (*Golovinomyces cichoracearum*)**	
	race 0	**race 1**	**race 2**	**race 4**	**race 5**	**race 0**	**race 1**
Iran H	S	S	S	S	S	S	S
Védrantais	R	S	S	S	S	R	S
PMR 45	R	R	S	S	S	R	S
WMR 29	R	R	R	S	S	R	S
Edisto 47	R	R	R	R	S	R	R
MR-1, PI 124112	R	R	R	R	R	R	R
PMR 5							
Nantais Oblong	R	S	S	S	S	R	R

S: susceptible (high sporulation) R: resistant (low sporulation)

Ad. 72: Resistance to colonization by *Aphis gossypii*

Maintenance of strain

Maintenance and multiplication:	on susceptible variety (Védrantais)
Special conditions:	low aphid density to avoid having too many winged types. "Synchronous"-type breeding in order to have only aphids of the same age and, therefore, at the same growing stage on a plant

Conduct of the test

Plant stage:	1st leaf measuring 2-3 cm
Temperature:	21°C
Light:	16 hours per day
Planting:	plants sown in sand, pricked out at cotyledon stage in compost-filled pots
Manner of inoculation:	deposit of ten adult wingless aphid per plant
Duration of test:	
- from sowing to inoculation:	15-18 days
- from inoculation to reading:	one day
Number of plants tested:	30
Recording:	- Resistance present = less than 7 adult aphids per plant; eggs rare. - Resistance absent = 9 or 10 adult aphids per plant; eggs frequent. - Record number of aphids per plant, 24 hours after inoculation.

Ad. 73: Resistance to Zucchini Yellow Mosaic Virus (ZYMV), race F

A. INOCULUM

Maintenance of strain

Maintenance:	5°C and kept dry using anhydrous calcium chloride
Special conditions:	pre-multiplication of the virus on non-wilting variety (Védrantais) prior to testing

B. INOCULATION AND INCUBATION

Conduct of the test

Plant stage:	1st emergent leaf
Temperature:	25°C during day, 18°C during night
Light:	12 hours per day
Manner of inoculation:	mechanical inoculation by rubbing of cotyledons with inoculum
Duration of test:	
- from sowing to inoculation:	15 days
- from inoculation to reading:	15 days
Number of plants tested:	30

C. SYMPTOMS AND OBSERVATIONS

Reading difficulty:	- heterozygotes (Fn/Fn+) wither and die more slowly than homozygotes (Fn/Fn) - use the F pathotype of ZYMV
Example varieties:	
Védrantais (Fn+/Fn+):	mosaic (resistance present)
Cantor (Fn/Fn+):	slower necrosis with wilting (resistance absent)
Doublon (Fn/Fn):	necrosis with wilting (resistance absent)

Ad. 74: Resistance to Papaya Ring Spot Virus (PRSV), race GVA and race E_2

A. INOCULUM

Maintenance of strain

Maintenance:	5°C and kept dry using anhydrous calcium chloride
Special conditions:	pre-multiplication of the virus on susceptible variety (Védrantais) prior to testing

B. INOCULATION AND INCUBATION

Conduct of the test

Plant stage:	1st emergent leaf
Temperature:	25°C during day, 18°C during night
Light:	12 hours per day
Manner of inoculation:	mechanical inoculation by rubbing cotyledons with inoculum
Duration of test:	
- from sowing to inoculation:	15 days
- from inoculation to reading:	15-20 days
Number of plants tested:	30

C. SYMPTOMS AND OBSERVATIONS

Identification of two strains of the PRSV virus and of the two alleles concerned:

Genotypes/Strains	GVA strain	E2 strain
Védrantais (Prsv^{+})	Mosaic (vein-clearing) = resistance absent	Mosaic (vein-clearing) = resistance absent
72025 (Prsv^{2})	- No systemic symptoms - Local necrotic lesions on cotyledons (irregular) = resistance present	- Apical necrosis = Necrosis of plant instead of local lesions: resistance absent
WMRV 29 (Prsv^{1})	- No systemic symptoms - Occasional local necrotic lesions on cotyledons = resistance present	- No systemic symptoms - Occasional local necrotic lesions on cotyledons = resistance present

Ad. 75: Resistance to Muskmelon Necrosis Spot Virus (MNSV), race E_{8}

A. INOCULUM

Maintenance of strain

Maintenance:	5°C and kept dry using anhydrous calcium chloride
Special conditions:	pre-multiplication on susceptible variety (Védrantais) prior to test

B. INOCULATION AND INCUBATION

Conduct of the test

Plant stage:	1st emergent leaf
Temperature:	25°C during day, 18°C during night
Light:	12 hours per day

Manner of inoculation: mechanical inoculation by rubbing of cotyledons with inoculum
Duration of test:
- from sowing to inoculation: 15 days
- from inoculation to reading: 8 days
Number of plants tested: 30

C. SYMPTOMS AND OBSERVATIONS

Susceptible plants: necrotic lesions on the inoculated organs (cotyledons)
Resistant plants: no lesions

Ad. 76: Resistance to Cucumber Mosaic Virus (CMV)

A. INOCULUM

1. Crushed solution

Phosphate disodic (Na_2HPO_4, 12 H_2O) (0,03M):	1,075 g
Diéthyldithiocarbamate of sodium (= DIECA):	0,2 g
Distilled water:	qsp 100 ml

The phosphate disodic solution can be stored in a refrigerator. Once the DIECA is added, the solution should be used within the next two hours.

2. Crushing the leaves

The source of the inoculum comes from crushing either the fresh leaves, or leaves desiccated in anhydrous calcium chloride (Ca $Cl_{2)}$, in a cold mortar.

Crush 1 gram of leaves with 4 ml of phosphate disodic solution at 5°C. Add active carbon (0,5 g) and carborendum (0,4 g) for each 1 gram of leaves. After crushing, put the mortar on a bed of ice.

Before using leaves dried with $CaCl_2$ to inoculate a plant test, do a multiplication of the inoculum on some 10 susceptible plants which would be used as inoculum.

3. Strains maintenance

CMV can be stored for several years by desiccation with anhydrous $CaCl_{2.}$. Leaves showing mosaic symptoms should be chopped finely with a razor blade and placed in cups. Put a layer of anhydrous calcium chloride (0,5 cm) in a plastic box and cover it with filter paper. Place the cups on this layer. Close the box well with adhesive tape, and then place it in a tightly closed plastic bag. Store it in a refrigerator at 5°C.

B. INOCULATION AND INCUBATION

Cotyledons or young leaves should be inoculated by rubbing them with a latex-protected finger. After a few minutes, rinse the cotyledons with running water. Place the plants for incubation in a growth chamber (generally at 18°C at night and 25°C in the day, with 12 to 14 hours of daylight).

C. SYMPTOMS AND OBSERVATIONS

The "common" strains of CMV bring out mosaic symptoms on susceptible plants one week after inoculation. Resistant plants show no symptoms.

Remarks:

When light intensity and daylight are not sufficient (winter period), resistant plants (in particular PI 161375) may present chlorotic lesions on the first leaf.

Strains:

Use "common" strains (as T1, P9) rather than "song" strains (14, T2).

		CMV common strains (T1, P9)	CMV song strains (14, T2)
Susceptible	Védrantais	mosaïc	mosaic
Resistant	PI 161375	no symptoms	mosaic, chlorotic lesions
	Virgos		

P9 brings out "aucuba" mosaic on susceptible varieties

P9 is less aggressive than T1

It is preferable to use Virgos rather than PI 161375 (lower germination, weaker growth).

Observations, notes:

The genetic resistance is polygenic. Use a notation with classes. It is preferable to use the two strains P9 and T1 to have a better evaluation of the resistance.

High resistance confers resistance on all common strains. Some genotypes may present a resistance to P9 (no symptoms), and a slight susceptibility to T1 (slight mosaic).

9. Literature

GENERAL

Besombes, D.; Giovinazzo, N.; Olivier, C.; Dogimont, C.; itrat, M., 1999: Description and inheritance of an albino mutant in melon, Cucurbit Genetics Cooperative Report (USA), no. 22; 14-15

El Tahir, I.M.; Pitrat, M., 1999: Tibish, a melon type from Sudan, Cucurbit Genetics Cooperative Report (USA), no. 22; 21-23.

Guis, M.; Roustan, J.P.; Dogimont, C.; Pitrat, M.; Pech, J.C., 1998: Melon biotechnology, Biotechnology and Genetic Engineering Reviews (GBR), vol. 15; 289-311.

Guis, M.; Botondi, R.; Ayub, R.; Ben Amor, M.; Guillen, P.; Latché, A.; Bouzayen, M.; Pech, J.C.; Dogimont, C.; Pitrat, M.; Lelièvre, J.M.; Albagnac, G., 1996: Physiological and biochemical evaluation of transgenic cantaloupe charentais melons with reduced levels of ACC oxidase, EUCARPIA; European Association for Research on Plant Breeding; Paris (FRA); Cucurbits towards 2000, 5. Eucarpia Meeting on Cucurbit Genetics and Breeding; Malaga (ESP); 1996/05/28-30, 194-199, EUCARPIA; Paris (FRA).

Le Couviour, M.; Pitrat, M.; Olivier, C.; Ricard, M., 1995 : Cochleare folium, a mutant with spoon-shaped leaf in melon, Cucurbit Genetics Cooperative (USA), no. 18; 37.

Périn, C.; Gomez-Jimenez, M.C.; Hagen, L.; Dogimont, C.; Pech, J.C.; Latché, A.; Lelièvre, J.M.; Pitrat, M., 2002: Genetic control of fruit quality and maturation traits in melon, ISHS; International Society for Horticultural Science; Cucurbit Working Group; (NLD); Cucurbits. Abstracts 2. International Symposium; Tsukuba (JPN); 2001/09/28; 2001/10/01, 1p.

Perin, C.; Dogimont, C.; Giovinazzo, N.; Besombes, D.; Guitton, L.; Hagen, L.; Pitrat, M., 1999: Genetic control and linkages of some fruit characters in melon, Cucurbit Genetics Cooperative Report (USA), no. 22; 16-18.

Périn, C.; Gomez, M.C.; Lelièvre, J.M.; Valentin, M.; Vaissière, B.; Gary, C.; Dogimont, C.; Causse, M.; Pech, J.C.; Pitrat, M., 1999: Contrôle génétique et éco-physiologique de l'élaboration de la qualité chez le melon *Cucumis melo L.*, Abagnac, G.; Colonna, P.; Doussinault, G.; Habib, R.; INRA; Institut National de la Recherche Agronomique; Paris (FRA); AIP-AGRAF pour l'élaboration de la composition et de l'aptitude à l'utilisation des grains et des fruits 1996-1999, 97-116.

Pitrat, M., 2002: 2002 gene list for melon, Cucurbit Genetics Cooperative Report (USA), no. 25; 76-93.

Pitrat, M.; Hanelt, P.; Hammer, K., 2000: Some comments on intraspecific classification of cultivars of melon, Katzir, N. (ed.); Paris, H.S. (ed.); ISHS; International Society for Horticultural Science; Working Group on Cucurbitaceae; Wageningen (NLD); Cucurbitaceae 2000. Proceedings; Acta Horticulturae (NLD), 7. EUCARPIA Meeting on Cucurbit genetics and breeding; Ma'ale Ha Hamisha (ISR); 2000/03/19-23, no. 510; 29-36, ISHS; Wageningen (NLD).

Pitrat, M., 1998: 1998 gene list for melon, Cucurbit Genetics Cooperative Report (USA), no. 21; 69-81.

Pitrat, M.; Dogimont, C.; Périn, C.; Hagen, L.; Burget, E.; Gomez Jimenez, M.C.; Mohamed, E.T.I.; Yousif, M.T.; Riffaud, C.; Rode, J.C., 2001: Recherches sur le melon, INRA; Centre d'Avignon; Unité de Génétique et d'Amélioration des Fruits et Légumes; Montfavet (FRA); Rapport d'activités 1997-2000, 39-45

Pitrat, M., 1998: Deux nouvelles techniques utilisées pour l'amélioration du melon, PHM Revue Horticole (FRA), no. 11; 6-7.

Pitrat, M.; Dogimont, C.; Baudracco-Arnas, S.; Cabasson, C.; Rode, J.C.; Carré, M., 1995: Recherches sur le melon, INRA; Centre de Recherche d'Avignon; Station d'Amélioration des Plantes Maraîchères; Montfavet (FRA); Rapport d'activités 1993-1994, 31-40, INRA Editions; Paris (FRA).

Pitrat, M.; Olivier, C.; Ricard, M., 1995: A virescent mutant in melon, Cucurbit Genetics Cooperative (USA), no. 18; 37.

Pitrat, M., 1995: Interaction between monoecy and male sterility in melon, Cucurbit Genetics Cooperative (USA), no. 18; 38-39.

Pitrat, M.; Risser, G., 1992: Le melon, Gallais, A. (ed.); Bannerot, H. (ed.); Amélioration des espèces végétales cultivées. Objectifs et critères de sélection, 448-459, INRA; Paris (FRA).

Pitrat, M.; Risser, G.; Maestro, C.; Epinat, C., 1991: Recherches sur le melon, Rapport d'activité 1991, no. 89-90; 27-34.

Pitrat, M.;Risser, G.; Ferriere, C.; Olivier, C.; Ricard, M., 1991: Two virescent mutants in melon (*Cucumis melo L.*), Cucurbit Genetics Cooperative (USA), no. 14; 45.

Risser, G.; Rode, J.C., 1988: Natural parthenocarpy observed on melon cv. "Dvash Ha Ogen", Risser, G. (Ed.); Pitrat, M. (Ed.); EUCARPIA; European Association for Research on Plant Breeding; Montfavet (FRA); Cucurbitaceae 88. Proceedings of the EUCARPIA meeting on Cucurbit Genetics and Breeding, Cucurbitaceae 88; Montfavet (FRA); 1988/05/31-1988/06/01-02, 113-114, INRA; Paris (FRA).

Risser, G., 1986: Maternal effect on growth of melon seedlings, Cucurbit Genetics Cooperative (USA), no. 9; 2 p.

DISEASE RESISTANCE

Bardin, M.; Perchepied, L.; Dogimont, C.; Nicot, P.; Pitrat, M., 2002: Analyse génétique de la résistance à l'oïdium chez le génotype de melon PI 124112, CNRS; CAES; Aussois (FRA); Journées Jean Chevaugeon, 4. Rencontres de Phytopathologie/Mycologie; Aussois (FRA); 2002/03/13-17, 1 p.

Bardin, M.; Pitrat, M.; Nicot, P.C., 2002: Oïdium du melon. Biologie et méthodes de lutte, Le Maraîcher (FRA); suppl. de PHM Revue Horticole, no. 436; 16-19.

Bardin, M.; Dogimont, C.; Pitrat, M.; Nicot, P.C., 1999: Virulence of *Sphaerotheca fuliginea* and *Erysiphe cichoracearum* on melon and genetic analysis of resistance of melon genotypes 'PI 124112' and 'PI 414723'. (poster), Bélanger, R.R.; Bushnel, W.R.; Carver, W.R.; Dik, A.J.; Kunoh, H.; Nicot, P.; Schmitt, A.; Powdery mildew. Programme and abstracts, 1. Conférence; Avignon (FRA); 1999/08/29; 1999/09/02, 85-86.

Bardin, M.; Dogimont, C.; Nicot, P.; Pitrat, M., 1999: Genetic analysis of resistance of melon line PI 124112 to *Sphaerotheca fuliginea* and *Erysiphe cichoracearum* studied in recombinant inbred lines, Abak, K. (ed.); Buyukalaca, S. (ed.); ISHS; International Society for Horticultural Science; Louvain (BEL); Cucurbits; Acta Horticulturae (NLD) 1. International Symposium; Adana (TUR); 1997/05/20-23, no. 492; 163-168, ISHS; Louvain (BEL).

Blancard, D.; Pitrat, M.; Jourdain, F., 1989: Etude de la sporulation de *Pseudoperonospora cubensis* (Berk. et Curt.) Rost. sur cotylédons de melon, application à la recherche de variétés résistantes, Phytopathologia Mediterranea (ITA), no. 28; 169-175.

Dogimont, C., 1995: Résistance du melon aux oïdiums des cucurbitacées. Présentation du Club Mildew, INRA; Centre de Recherche d'Avignon; Station de Pathologie Végétale; Montfavet (FRA); Compte-rendu, 4. Réunion du Groupe oïdium; Avignon (FRA); 1995/04/25-26, 5 p., INRA; Avignon (FRA).

Dogimont, C.; Bordat, D.; Pagès, C.; Boissot, N.; Pitrat, M., 1999: One dominant gene conferring the resistance to the leafminer, Liriomyza trifolii (Burgess) diptera: Agromyzidae in melon (*Cucumis melo L.*), Euphytica (NLD), vol. 105; 63-67.

Dogimont, C.; Bordat, D.; Pitrat, M.; Pagès, C., 1995: Characterization of resistance to Liriomyza trifolii (Burgess) in melon (*Cucumis melo L.*), Fruits (FRA), vol. 50 no. 6; 449-452.

Dogimont, C.; Bordat, D.; Pitrat, M.; Pages, C., 1994: Mise en évidence d'une résistance à Liriomyza trifolii (Burgess) chez le melon (*Cucumis melo L.*), CIRAD; Centre de Coopération Internationale en Recherche Agronomique pour le Développement; Département des Productions Fruitières et Horticoles; Montpellier (FRA); Réunion annuelle 1994. Programme et résumés des communications, Productions horticoles; Montpellier (FRA); 1994/08/29; 1994/09/02, 1 p., CIRAD; Montpellier (FRA).

Dogimont, C.; Thabuis, A.; Pitrat, M.; Lecoq, H., 1999: Différentes résistances au cucurbit aphid borne yellows luteovirus chez le melon contrôlées par deux gènes récessifs complémentaires, Yot, P. (ed.); CNRS; Département des Sciences de la Vie; Paris (FRA); INRA; Département Santé des Plantes et Environnement; Paris (FRA); CIRAD; Centre de Coopération Internationale en Recherche Agronomique pour le Développement; Délégation Scientifique Défense des Cultures; Montpellier (FRA); SFP; Société Française de Phytopathologie; Le Rheu (FRA); Virologie végétale, 7. Rencontres; Aussois, (FRA); 1999/03/14-18, 49.

Dogimont, C.; Bussemakers, A.; Martin, J.; Slama, S.; Lecoq, H.; Pitrat, M., 1997: Two complementary recessive genes conferring resistance to cucurbit aphid borne yellows luteovirus in an indian melon line (*Cucumis melo L.*), Euphytica (NLD), no. 96; 391-395.

Dogimont, C.; Bussemakers, A.; Slama, S.; Martin, J.; Lecoq, H.; Pitrat, M., 1996: Diversity of resistance sources to cucurbit aphid borne yellows luteovirus in melon and genetics of resistance, EUCARPIA; European Association for Research on Plant Breeding; Paris (FRA); Cucurbits towards 2000, 5. Eucarpia Meeting on Cucurbit Genetics and Breeding; Malaga (ESP); 1996/05/28-30, 328-333, EUCARPIA; Paris (FRA).

Dogimont, C.; Slama, S.; Martin, J.; Lecoq, H.; Pitrat, M., 1996: Sources of resistance to cucurbit aphid borne yellows luteovirus in a melon germ plasm collection, Plant Disease (USA), vol. 80 no. 2; 1379-1382.

Dogimont, C.; Slama, S.; Martin, J.; Lecoq, H.; Pitrat, M., 1995: A la recherche de résistances au Cucurbit aphid borne yellows virus chez le melon, INRA; Institut National de la Recherche Agronomique; Paris (FRA); CNRS; Centre National de la Recherche Scientifique; Paris (FRA); Rencontres de Virologie végétale, 5; Aussois (FRA); 1995/01/23-27, 39, CNRS; Paris (FRA).

Epinat, C.; Pitrat, M.; Bertrand, F., 1993: Genetic analysis of resistance of five melon lines to powdery mildews, Euphytica (NLD), no. 65; 135-144.

Hosoya, K.; Narisawa, K.; Pitrat, M.; Ezura, H., 1999: Race identification in powdery mildew (*Sphaerotheca fuliginea*) on melon (*Cucumis melo*) in Japan, Plant Breeding (DEU), no. 118; 259-262.

Lecoq, H.; Pitrat, M.; Bon, M.; Wipf Scheibel, C.; Bourdin, D., 1992: Resistance in melon to cucurbit aphid borne yellows virus, a luteovirus infecting cucurbits, 5. EUCARPIA Cucurbitaceae Symposium; Skierniewice (POL); 1992/07/27-31, 191-196, Research Institute of Vegetable Crops; Skierniewice (POL).

Mahgoub, H.A.; Wipf-Scheibel, C.; Delécolle, B.; Pitrat, M.; Dafalla, G.; Lecoq, H., 1997: Melon rugose mosaic virus: characterization of an isolate from Sudan and seed transmission in melon, Plant Disease (USA), vol. 81 no. 6; 656-660.

Morris, C.; Pitrat, M., 1998: La bactériose du melon: Connaissances acquises et travaux en cours, PHM Revue Horticole (FRA), no. 393; 44-47.

Mc Creight, J.D.; Pitrat, M., 1993: Club mildew : working group on resistance of melon to powdery mildew, Cucurbit Genetics Cooperative (USA), no. 16; 39.

Pitrat, M.; Dogimont, C.; Bardin, M., 1998: Resistance to fungal diseases of foliage in melon, Mc Creight, J.D. (ed.); ASHS; American Society for Horticultural Science; Alexandria (USA); Evaluation and enhancement of cucurbit germplasm, Cucurbitaceae ‘98; Pacific Grove (USA); 1998/11/30; 1998/12/04, 167-173, ASHS; Alexandria (USA).

Pitrat, M.; Risser, G.; Bertrand, F; Blancard, D.; Lecoq, H., 1996: Evaluation of a melon collection for disease resistances, EUCARPIA; European Association for Research on Plant Breeding; Paris (FRA); Cucurbits towards 2000, 5. Eucarpia Meeting on Cucurbit Genetics and Breeding; Malaga (ESP); 1996/05/28-30, 49-58, EUCARPIA; Paris (FRA).

Pitrat, M., 1996: Contrôle génétique des résistances aux maladies chez le melon, INRA; Direction des Relations Internationales; Secteur Méditerranée; Paris (FRA); IRTA; Institut de Recerca i Tecnologia Alimentaries; Barcelone (ESP); Lutte intégrée et exploitation de la diversité génétique chez les fruits et légumes, Séminaire INRA-IRTA; Barcelone (ESP); 1996/10/24-25, 44-51.

Pitrat, M., 1993: La lutte génétique, un moyen biologique de protection. Le point sur les résistances aux maladies chez le melon, Vaucluse Agricole (FRA), no. 1368; 9-10 Pochard, E.; Pitrat, M., 1990: Stratégie de lutte génétique contre les maladies à virus des plantes: exemple du melon et du piment en zone méditerranéenne, Sélectionneur Français (FRA), Parasites animaux et végétaux des cultures maraîchères de plein champ, et méthodes de lutte; Siracusa (ITA); 1988/02/22-24, no. 41; 63-70.

Pitrat, M.; Dogimont, C.; Hagen, L.; Burget, E.; Lecoq, H.; Bendahmane, A., 2001: La résistance du melon au puceron *Aphis gossypii* INRA Mensuel (FRA), no. 111; 17-19.

Pitrat, M.; Lecoq, H.; Lapchin, L., 1995: Stabilité des résistances aux virus et au puceron *Aphis gossypii* chez le melon, INRA, CTPS Comité Scientifique, Paris (FRA); Etude de la co-évolution des populations végétales domestiques face à leurs agents pathogènes ou ravageurs Séminaire; Paris (FRA); 1995/06/21, 27-32.

Pitrat, M.; Maestro, C.; Ferriere, C.; Ricard, M.; Alvarez, J., 1988: Resistance to *Aphis gossypii* in spanish melon (*Cucumis melo*), Cucurbit Genetics Cooperative (USA), vol. 11 no. 51: 2 p.

Pitrat, M.; Lecoq, H., 1982: Relations génétiques entre les résistances par non acceptation et par antibiose du melon à *Aphis gossypii*. Recherche de liaisons avec d'autres gènes, 1982Agronomie (FRA), vol. 2 no. 6; 503-508.

Pitrat, M.; Lecoq, H., 1980: Non acceptance of melon to *Aphis gossypii*, its inheritance and relation to antibiosis, tolerance and resistance to virus transmission, Resistance to insects and mites, 2. EUCARPIA/IOBC Meeting of the working group; Canterbury (GBR); 1980/04/09-11; 5 p.

Pitrat, M.; Bordat, D.; Dalle, M., 1993: Recherche de résistances chez le melon (*Cucumis melo L.*) envers Liriomyza trifolii (Burgess), Diptera Agromyzidae, CIRAD; Centre de Coopération Internationale en Recherche Agronomique pour le Développement; Mission de Coopération Phytosanitaire; Montpellier (FRA); Liriomyza, Colloque sur les mouches mineuses des plantes cultivées; Montpellier (FRA); 1993/03/24-26, 127-133, CIRAD; Montpellier (FRA).

Pitrat, M.; Lecoq, H.; Wipf-Scheibel, C., 1993: Hérédité de la résistance du melon au cucurbit aphid borne yellows virus, INRA; Institut National de la Recherche Agronomique: Paris (FRA); CNRS; Centre National de la Recherche Scientifique; Paris (FRA); Résumés des communications, 4. Rencontres de virologie végétale; Aussois (FRA); 1993/01/25-29, 16, CNRS; Aussois (FRA).

Pitrat, M., 1997: Melon: les résistances aux virus, Fruits et Légumes (FRA), no. 151: 15. Lecoq, H.; Clauzel, J.M.; Pitrat, M., 1989: Epidémiologies comparées du CMV, du WMV2, du ZYMV, et du PRSV chez des variétés de melon sensible ou possédant des résistances partielles, CNRS; Centre National de la Recherche Scientifique; Paris (FRA; INRA; Institut National de la Recherche Agronomique; Paris (FRA); Secondes rencontres de virologie végétale, 2. Rencontres; Aussois (FRA); 1989/01/24-28, 14, CNRS; Paris (FRA).

Pitrat, M.; Lecoq, H., 1984: Exploitation de différentes formes de résistance aux virus chez le melon, Sélectionneur Français (FRA), Journée ASF; Versailles (FRA); 1984/02/02, no. 34; 29-37.

Pitrat, M.; Blancard, D., 1988: Le mildiou du melon (variétés résistantes et méthodes de lutte). Rapport final 1988, 4 p. INRA; GAFL; Génétique et Amélioration des Fruits et Légumes; Centre de recherche d'Avignon (FRA).

Pochard, E.; Pitrat, M., 1988: Stratégie de lutte génétique contre les maladies à virus des plantes: exemple du melon et du piment en zone méditerranéenne, Parasites animaux et végétaux des cultures maraîchères de plein champ et méthodes de lutte, Congres; Siracusa (ITA); 1988/02/22-24, 6 p., Association phytopathologique italienne (ITA).

Taha Yousif, M; Khey-Pour, A; Gronenborn, B.; Pitrat, M.; Dogimont, C., 2001 : Recherche de sources de résistance au watermelon chlorotic stunt begomovirus (WMCSV) chez le melon (*Cucumis melo L.*) et hérédité de la résistance, INRA; Paris (FRA); CNRS; Paris (FRA); CIRAD; Centre de Coopération Internationale en Recherche Agronomique pour le Développement; Montpellier (FRA); Virologie végétale, 8. Rencontres; Aussois, (FRA); 2001/03/11-15, 33.

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	*Cucumis melo* L.
1.2 Common Name	Melon

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)

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

(c) totally unknown cross [ ]

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

4.1.3 Other [ ]
(please provide details)

4.2 Method of propagating the variety

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 (12)	**Inflorescence: sex expression (at full flowering)**		
	monoecious	Alpha, Categoría	1[ ]
	andromonoecious	Piel de Sapo	2[ ]
5.2 (28)	**Fruit: shape in longitudinal section**		
	ovate	De Cavaillon, Piolín	1[ ]
	medium elliptic	Piel de Sapo	2[ ]
	broad elliptic	Corin, Sardo	3[ ]
	circular	Alpha, Galia	4[ ]
	quadrangular	Zatta	5[ ]
	oblate	Jívaro, Noir de Carmes	6[ ]
	obovate	Cganchi	7[ ]
	elongated	Alficoz, Banana	8[ ]
5.3 (29)	**Fruit: ground color of skin**		
	white	Albino, Honey Dew	1[ ]
	yellow	Amarillo-Canario, Edén, Galia, Passport, Solarking	2[ ]
	green	Gohyang, Piel de Sapo	3[ ]
	grey	Geaprince, Geamar, Romeo, Sirio, Supporter, Védrantais	4[ ]

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

	Characteristics	Example Varieties	Note
5.4 (36)	**Fruit: density of patches**		
	absent or very sparse	Rochet	1[ ]
	sparse		3[ ]
	medium	Braco	5[ ]
	dense	Piel de Sapo	7[ ]
	very dense	Oranje Ananas	9[ ]
5.5 (38)	**Fruit: warts**		
	absent	Piel de Sapo	1[ ]
	present	Zatta	9[ ]
5.6 (43)	**Fruit: grooves**		
	absent or very weakly expressed	Piel de Sapo, Arava	1[ ]
	weakly expressed	Total, Hobby	2[ ]
	strongly expressed	Védrantais, Galia	3[ ]
5.7 (48)	**Fruit: cork formation**		
	absent	Alpha	1[ ]
	present	Dalton	9[ ]
5.8 (50)	**Fruit: pattern of cork formation**		
	dots only	Hermes, Védrantais	1[ ]
	dots and linear	Jivaro, Topper	2[ ]
	linear only	Futuro, Riosol	3[ ]
	linear and netted	Anatol, Chantal	4[ ]
	netted only	Galia, Perlita	5[ ]

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

	Characteristics	Example Varieties	Note
5.9 (51)	**Fruit: density of pattern of cork formation**		
	very sparse	Alpha, Amarillo Oro	1[ ]
	sparse	Védrantais	3[ ]
	medium	Regal, Vital	5[ ]
	dense	Galia, Geamar	7[ ]
	very dense	Honey Rock, Perlita	9[ ]
5.10 (54)	**Fruit: main color of flesh**		
	white	Piel de Sapo	1[ ]
	greenish white	Galia	2[ ]
	green	Radical	3[ ]
	yellowish white	Guaraní	4[ ]
	orange	Védrantais	5[ ]
	reddish orange	Magenta	6[ ]
5.11 (60)	**Seed: length**		
	very short	Geumssaraki, Golden Crispi	1[ ]
	short	Elario, Katsura Giant	3[ ]
	medium	Arava, Sancho	5[ ]
	long	Amarillo Oro, Toledo	7[ ]
	very long	Albino	9[ ]
5.12 (63)	**Seed: color**		
	whitish	Amarillo Oro s.b.	1[ ]
	cream yellow	Galia, Piel de Sapo	2[ ]

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

	Characteristics	Example Varieties	Note
5.13 (68)	**Shelf life of fruit**		
	very short	Charentais	1[ ]
	short	Galia	3[ ]
	medium	Clipper	5[ ]
	long	Piel de Sapo	7[ ]
	very long	Tendral Negro	9[ ]

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	*Density of pattern of cork formation*	*dense*	*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 Special conditions for the examination of the variety

Yes [ ] No [ ]

If yes, please give details:

……

7.3 Other information

A representative color photograph 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.

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

[End of document]