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Acca sellowiana (Berg) Burret

GUIDELINES

FOR THE CONDUCT OF TESTS

FOR DISTINCTNESS, UNIFORMITY AND STABILITY

prepared by experts from New Zealand

to be considered by the

*Enlarged Editorial Committee at its meeting
to be held in Geneva, on January 7 and 8, 2015*

Disclaimer: this document does not represent UPOV policies or guidance

Alternative Names:*

Botanical name	English	French	German	Spanish
<i>Acca sellowiana</i> (Berg) Burret	Feijoa, Pineapple Guava, Guavasteen	Feijoa	Feijoa	Feijoa

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 *Acca sellowiana* (Berg) Burret.

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 one-year-old trees. The trees can be propagated by cuttings or grafted on a rootstock as specified by the testing authority.

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

5 trees.

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*

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

3.1.2 The growing cycle is considered to be the duration of a single growing season, beginning with vegetative growth, continuing through flowering, active vegetative growth and fruit development and concluding after the harvest of fruit.

3.1.3 In particular, it is essential that the trees produce a satisfactory crop of fruit in each of the two 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*

3.3.1 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.

3.3.2 Because daylight varies, color determinations made against a color chart should be made either in a suitable cabinet providing artificial daylight or in the middle of the day in a room without direct sunlight. The spectral distribution of the illuminant for artificial daylight should conform with the CIE Standard of Preferred Daylight D 6500 and should fall within the tolerances set out in the British Standard 950, Part I. These determinations should be made with the plant part placed against a white background. The color chart and version used should be specified in the variety description.

3.4 *Test Design*

3.4.1 Each test should be designed to result in a total of at least 5 plants.

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 *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 5 plants or parts taken from each of 5 plants and any other observations made on all plants in the test, disregarding any off-type plants. In the case of observations of parts taken from single plants, the number of parts to be taken from each of the plants should be 2.

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:

4.2.2 For the assessment of uniformity of vegetatively propagated 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 5 plants, no 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 plant 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) Tree: growth habit (characteristic 1)
- (b) Leaf blade: variegation on upper side (characteristic 13)
- (c) Fruit: weight (characteristic 24)
- (d) Fruit: shape (characteristic 28)
- (e) Fruit: color of skin (characteristic 33)
- (f) Fruit: rugosity of skin (characteristic 34)
- (g) Time of harvest maturity (characteristic 42)

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*

- | | | |
|----------------|--|---------------------|
| (*) | Asterisk 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)-(c) | 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 (*) (+)	Tree: growth habit	Arbre : port	Baum: Wuchsform	Árbol: hábito de crecimiento		
QN	upright	dressé	aufrecht	erecto	Apollo, Marion	1
	semi-upright	demi-dressé	halbaufrecht	semierecto	Kakapo, SCS411 Alcantara, Unique	2
	spreading	étalé	breitwüchsig	extendido	Pounamu, SCS412 Helena	3
2. VG (*) (+)	Tree: vigor	Arbre : vigueur	Baum: Wuchsstärke	Árbol: vigor		
QN	weak	faible	gering	débil	SCS412 Helena, Unique	3
	medium	moyen	mittel	medio	SCS411 Alcantara, Opal Star	5
	strong	fort	stark	fuerte	Apollo, Gemini	7
3. VG/ MG (*) (+)	Current seasons shoot: length of internode	Rameau de l'année : longueur de l'entre-nœud	Jahrestrieb: Länge der Internodie	Rama del año en curso: longitud del entrenudo		
QN	short	court	kurz	corto	Unique	3
	medium	moyen	mittel	medio	Marion	5
	long	long	lang	largo	Gemini	7
4. VG/ MS (*) (+)	Leaf blade: length	Limbe : longueur	Blattspreite: Länge	Limbo: longitud		
QN (a)	short	court	kurz	corto	Opal Star, Unique	3
	medium	moyen	mittel	medio	Apollo, Pounamu	5
	long	long	lang	largo	Kakariki	7
5. VG/ MS (*) (+)	Leaf blade: width	Limbe : largeur	Blattspreite: Breite	Limbo: anchura		
QN (a)	narrow	étroit	schmal	estrecho	Marion	3
	medium	moyen	mittel	medio	Unique	5
	broad	large	breit	ancho	Anatoki	7
6. VG/ MS (*) (+)	Leaf blade: ratio length/width	Limbe : rapport longueur/largeur	Blattspreite: Verhältnis Länge/Breite	Limbo: relación longitud/anchura		
QN (a)	very low	très bas	sehr klein	muy baja	Opal Star, SCS412 Helena	1
	low	bas	klein	baja	Apollo, Marion, SCS411 Alcantara	2
	medium	moyen	mittel	media	Pounamu	3
	high	élevé	groß	alta	Kawatiri	4

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
7. (*) (+)	VG	Leaf blade: shape	Limbe : forme	Blattspreite: Form	Limbo: forma		
PQ	(a)	ovate	ovale	eiförmig	oval		1
		elliptic	elliptique	elliptisch	elíptico	Apollo	2
		oblong	oblong	breitrund	oblongo		3
		obovate	obovale	verkehrt eiförmig	oboval	SCS411 Alcantara, SCS412 Helena	4
8. (*) (+)	VG	Leaf blade: position of broadest part	Limbe : position de la partie la plus large	Blattspreite: Stelle des breitesten Teils	Limbo: posición de la parte más ancha		
QN	(a)	below middle	au-dessous du milieu	unter der Mitte	por debajo de la mitad		1
		in middle	au milieu	in der Mitte	en la mitad	Marion, Unique	2
		above middle	au-dessus du milieu	über der Mitte	por encima de la mitad	SCS411 Alcantara, SCS412 Helena, Triumph	3
9. (+)	VG	Leaf blade: shape of apex	Limbe : forme du sommet	Blattspreite: Form der Spitze	Limbo: forma del ápice		
PQ	(a)	acute	aigu	spitz	agudo	Gemini	1
		obtuse	obtus	stumpf	obtuso	Apollo, SCS411 Alcantara	2
		rounded	arrondi	abgerundet	redondeado	Marion, SCS412 Helena	3
		truncate	tronqué	abgestumpft	truncado		4
		retuse	échancré	eingedrückt	retuso		5
10. (+)	VG	Leaf blade: shape of base	Limbe : forme de la base	Blattspreite: Form der Basis	Limbo: forma de la base		
PQ	(a)	acute	aigue	spitz	aguda	Gemini, Kakapo, SCS412 Helena	1
		obtuse	obtuse	stumpf	obtusa	SCS411 Alcantara, Unique	2
		rounded	arrondie	abgerundet	redondeada		3
11. (+)	VG	Leaf blade: profile in cross section	Limbe : profil en section transversale	Blattspreite: Profil im Querschnitt	Limbo: perfil en sección transversal		
QN	(a)	concave	concave	konkav	cóncavo	SCS412 Helena	1
		flat	plat	flach	plano	Opal Star, SCS411 Alcantara	2
		convex	convexe	konvex	convexo		3
12. (*) (+)	VG	Leaf blade: main color of upper side	Limbe : couleur principale de la face supérieure	Blattspreite: Hauptfarbe der Oberseite	Limbo: color principal del haz		
PQ	(a)	light green	vert clair	hellgrün	verde claro		1
		medium green	vert moyen	mittelgrün	verde medio	Opal Star	2
		dark green	vert foncé	dunkelgrün	verde oscuro	Apollo	3
		grey green	gris-vert	graugrün	verde grisáceo	Marion	4

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
13.	VG	Leaf blade: variegation on upper side	Limbe : panachure de la face supérieure	Blattspreite: Panaschierung der Oberseite	Limbo: variegación del haz		
QL	(a)	absent	absente	fehlend	ausente		1
		present	présente	vorhanden	presente		9
14.	VG	Leaf blade: color of lower side	Limbe : couleur de la face inférieure	Blattspreite: Farbe der Unterseite	Limbo: color del envés		
PQ	(a)	whitish	blanchâtre	weißlich	blanquecino	Apollo, SCS412 Helena	1
		light green	vert clair	hellgrün	verde claro	SCS411 Alcantara	2
		medium green	vert moyen	mittelgrün	verde medio	SCS414 Mattos	3
		greyish green	vert grisâtre	graugrün	verde grisáceo	SCS415 Nonante	4
15.	VG	Inflorescence: arrangement	Inflorescence : disposition	Blütenstand: Anordnung	Inflorescencia: disposición		
QL	(b)	terminal only	terminale seulement	nur terminal	solamente terminal		1
		terminal and lateral	terminale et latérale	terminal und lateral	terminal y lateral	SCS411 Alcantara, SCS412 Helena	2
16.	VG/MS	Petal: length	Pétale : longueur	Blütenblatt: Länge	Pétalo: longitud		
QN	(b)	short	court	kurz	corto		1
		medium	moyen	mittel	medio	Kawatiri, SCS411 Alcantara, SCS412 Helena	2
		long	long	lang	largo		3
17.	VG	Petal: color of upper side	Pétale : couleur de la face supérieure	Blütenblatt: Farbe der Oberseite	Pétalo: color de la cara superior		
PQ	(b)	RHS Color Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	carta de colores RHS (indíquese el número de referencia)		
18.	VG	Stamens: number	Étamines : nombre	Staubgefäße: Anzahl	Estambres: número		
QN	(b)	few	petit	wenige	bajo	Anatoki	1
		medium	moyen	mittel	medio	Gemini	2
		many	grand	viele	alto	Kaiteri	3
19.	VG	Filaments: color	Filaments : couleur	Staubfäden: Farbe	Filamentos: color		
PQ	(b)	pink	rose	rosa	rosa		1
		reddish pink	rose-rouge	rötlich rosa	rosa rojizo		2
		red	rouge	rot	rojo	SCS411 Alcantara, SCS412 Helena	3

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
20. (*) (+)	VG	Anthers: color of theca	Anthères : couleur de la thèque	Antheren: Farbe der Theka	Anteras: color de la teca		
PQ	(b)	yellowish white	blanc jaunâtre	gelblich weiß	blanco amarillento		1
		reddish white	blanc rougeâtre	rötlich weiß	blanco rojizo	Apollo, Gemini	2
		medium red	rouge moyen	mittelrot	rojo medio	SCS411 Alcantara	3
		dark red	rouge foncé	dunkelrot	rojo oscuro	SCS415 Nonante	4
21. (+)	VG	Anthers: color of connective	Anthères : couleur du connectif	Antheren: Farbe des Konnektivs	Anteras: color del conectivo		
PQ	(b)	yellowish white	blanc jaunâtre	gelblich weiß	blanco amarillento	Unique	1
		reddish white	blanc rougeâtre	rötlich weiß	blanco rojizo	Apollo, Gemini	2
		medium red	rouge moyen	mittelrot	rojo medio	SCS411 Alcantara	3
		dark red	rouge foncé	dunkelrot	rojo oscuro	SCS415 Nonante	4
22.	VG	Style: color of upper half	Style : couleur de la moitié supérieure	Griffel: Farbe der oberen Hälfte	Estilo: color de la mitad superior		
PQ	(b)	green	vert	grün	verde		1
		reddish green	vert rougeâtre	rötlich grün	verde rojizo	Alcantara	2
		red	rouge	rot	rojo	Apollo, SCS412 Helena	3
23.	VG	Stigma: position in relation to anthers	Stigmate : position par rapport aux anthères	Narbe: Stellung im Vergleich zu den Antheren	Estigma: posición en relación con las anteras		
QN	(b)	slightly above	légèrement au-dessus	leicht oberhalb	ligeramente por encima		1
		moderately above	modérément au-dessus	mäßig oberhalb	moderadamente por encima	SCS411 Alcantara, SCS412 Helena	2
		strongly above	nettement au-dessus	stark oberhalb	muy por encima	Apollo, Unique	3
24. (*)	MG	Fruit: weight	Fruit : poids	Frucht: Gewicht	Fruto: peso		
QN	(c)	low	faible	niedrig	bajo	Apollo, Opal Star	3
		medium	moyen	mittel	medio	Pounamu, SCS411 Alcantara	5
		high	élevé	hoch	alto	Anilvinkoru, SCS412 Helena	7
25. (*) (+)	VG/ MS	Fruit: length	Fruit : longueur	Frucht: Länge	Fruto: longitud		
QN	(c)	very short	très court	sehr kurz	muy corto		1
		short	court	kurz	corto		3
		medium	moyen	mittel	medio	Apollo, Opal Star	5
		long	long	lang	largo	Gemini, Pounamu	7
		very long	très long	sehr lang	muy largo	Marion	9

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
26.	VG/MS	Fruit: width	Fruit : largeur	Frucht: Breite	Fruto: anchura		
Q	(c)	narrow	étroit	schmal	estrecho	Unique	3
		medium	moyen	mittel	medio	Kakapo, Opal Star	5
		broad	large	breit	ancho	Kawatiri	7
27.	VG/MG	Fruit: ratio length/width	Fruit : rapport longueur/largeur	Frucht: Verhältnis Länge/Breite	Fruto: relación longitud/anchura		
Q	(c)	low	bas	leicht	baja	SCS411 Alcantara	3
		medium	moyen	mittel	media	Pounamu, SCS412 Helena	5
		high	élevé	hoch	alta	Triumph	7
28.	VG	Fruit: shape	Fruit : forme	Frucht: Form	Fruto: forma		
P	(c)	ovate	ovale	eiförmig	oval	Pounamu	1
		circular	circulaire	kreisförmig	circular		2
		elliptic	elliptique	elliptisch	elíptico	Opal Star, SCS411 Alcantara	3
		oblong	oblong	breitrund	oblongo		4
		rhombic	losangique	rhombisch	rómbico		5
		obovate	obovale	verkehrt eiförmig	oboval	Gemini, Kakapo, SCS412 Helena	6
		oblanceolate	oblancéolé	verkehrt lanzettlich	oblanceolado		7
29.	VG	Fruit: longitudinal symmetry	Fruit : symétrie longitudinale	Frucht: Längssymmetrie	Fruto: simetría longitudinal		
Q	(c)	symmetric or slightly asymmetric	symétrique ou légèrement asymétrique	symmetrisch oder leicht asymmetrisch	simétrico o ligeramente asimétrico	Opal Star, SCS411 Alcantara, Unique	1
		moderately asymmetric	modérément asymétrique	mäßig asymmetrisch	moderadamente asimétrico	Apollo	2
		strongly asymmetric	fortement asymétrique	stark asymmetrisch	muy asimétrico	Triumph	3
30.	VG	Fruit: slope of shoulder at stalk end	Fruit : inclinaison de l'épaule à l'extrémité pédonculaire	Frucht: Neigung der Schulter am Stielende	Fruto: inclinación del hombro en el extremo peduncular		
Q	(c)	weak	faible	schwach	débil	Opal Star, SCS411 Alcantara	1
		medium	moyenne	mittel	media	Kakapo, Pounamu	2
		strong	forte	stark	fuerte	Anilvinkoru, Apollo	3
31.	VG	Fruit: point of attachment of stalk	Fruit : point d'attache du pédoncule	Frucht: Ansatzpunkt des Stengels	Fruto: punto de inserción del pedúnculo		
Q	(c)	depressed	déprimé	eingesenkt	deprimido	Gemini, SCS412 Helena, Unique	1
		flat	plat	flach	plano	Opal Star	2
		raised	protubérant	vorgewölbt	prominente	Apollo	3

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
32.	VG	Fruit: attitude of sepals	Fruit : position des sépales	Frucht: Haltung der Kelchblätter	Fruto: porte de los sépalos		
QN	(c)	erect	dressés	aufrecht	erectos	Kakapo, Opal Star, SCS412 Helena	1
		semi-erect	demi-dressés	halbaufrecht	semierectos	Marion, Unique	2
		horizontal	horizontaux	horizontal	horizontales	Apollo, Pounamu	3
33.	VG	Fruit: color of skin	Fruit : couleur de la peau	Frucht: Farbe der Schale	Fruto: color de la piel		
PQ	(c)	light green	vert clair	hellgrün	verde claro	Unique	1
		medium green	vert moyen	mittelgrün	verde medio	Apollo, Opal Star, SCS411 Alcantara	2
		dark green	vert foncé	dunkelgrün	verde oscuro	Anilvinkoru, Kakapo	3
		grey green	gris-vert	graugrün	verde grisáceo	Marion	4
34.	VG	Fruit: rugosity of skin	Fruit : rugosité de la peau	Frucht: Rauheit der Schale	Fruto: rugosidad de la piel		
	(c)	smooth or very slight	lisse ou très peu rugueuse	glatt oder sehr gering	lisa o muy leve	Opal Star, SCS412 Helena	1
QN		slight	peu rugueuse	gering	leve	Kakapo, Marion	3
		moderate	modérément rugueuse	mäßig	moderada	Apollo, SCS411 Alcantara, Triumph	5
		strong	très rugueuse	stark	fuerte	Unique	7
35.	VG	Fruit: longitudinal grooving	Fruit : cannelures longitudinales	Frucht: Längsriefung	Fruto: acanalado longitudinal		
QN	(c)	absent or weak	absentes ou faibles	fehlend oder schwach	nulo o débil	Pounamu, SCS412 Helena	1
		medium	moyennes	mittel	medio	Kakapo	2
		strong	fortes	stark	fuerte	Anilvinkoru	3
36.	VG	Fruit: thickness of skin	Fruit : épaisseur de la peau	Frucht: Dicke der Schale	Fruto: grosor de la piel		
QN	(c)	thin	mince	dünn	delgada		1
		medium	moyenne	mittel	media		2
		thick	épaisse	dick	gruesa		3
37.	VG	Fruit: thickness of pericarp	Fruit : épaisseur du péricarpe	Frucht: Dicke des Perikarps	Fruto: grosor del pericarpio		
QN	(c)	thin	mince	dünn	delgado		1
		medium	moyen	mittel	medio		2
		thick	épais	dick	grueso		3
38.	VG	Fruit: color of outer pericarp	Fruit : couleur du péricarpe externe	Frucht: Farbe des äußeren Perikarps	Fruto: color del pericarpio externo		
PQ	(c)	white	blanc	weiß	blanco	Kakapo	1
		yellowish white	blanc jaunâtre	gelblich weiß	blanco amarillento	Gemini, Unique	2
		yellow	jaune	gelb	amarillo	Opal Star	3

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
39. (*) (+)	VG	Fruit: width of locules relative to fruit	Fruit : largeur des loges par rapport au fruit	Frucht: Breite der Kernkammern im Verhältnis zur Frucht	Fruto: anchura de los lóculos en relación con el fruto		
QN	(c)	very small	très étroites	sehr schmal	muy pequeños	Triumph	1
		small	étroites	schmal	pequeños	Kakapo, Pounamu	3
		medium	moyennes	mittel	medianos	SCS412 Helena, Unique	5
		large	larges	breit	grandes	SCS411 Alcantara	7
40. (*)	VG	Fruit: color of locules	Fruit : couleur des loges	Frucht: Farbe der Kernkammern	Fruto: color de los lóculos		
PQ	(c)	transparent	transparentes	transparent	transparentes	Apollo, Waitui	1
		whitish	blanchâtres	weißlich	blanquecinos	SCS415 Nonante	2
		reddish	rougeâtres	rötlich	rojizos		3
41.	VG	Seed: size	Pépin : taille	Samen: Größe	Semilla: tamaño		
QN	(c)	small	petit	klein	pequeña	Unique	1
		medium	moyen	mittel	mediana	SCS411 Alcantara, SCS412 Helena	2
		large	grand	groß	grande		3
42. (*) (+)	VG/ MG	Time of harvest maturity	Époque de maturité de récolte	Zeitpunkt der Erntereife	Época de madurez para la cosecha		
QN		very early	très précoce	sehr früh	muy temprana	Waitui	1
		early	précoce	früh	temprana	Unique	3
		medium	moyenne	mittel	media	Apollo, Gemini	5
		late	tardive	spät	tardía	Kakapo, Opal Star	7
		very late	très tardive	sehr spät	muy tardía	Triumph	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) Observations on the leaf should be made on the middle third of a one year old shoot.
- (b) Observations on the flower should be made when approximately 50% of flowers on a tree are open.
- (c) Observations on the fruit should be made when harvested.

8.2 *Explanations for individual characteristics*

Ad. 1: Tree: growth habit

The growth habit is observed at the end of the growing season after fruit harvest.

Ad. 2: Tree: vigor

Observations should be made during active vegetative growth. The vigor of the tree should be considered as the overall abundance of vegetative growth.

Ad. 3: Current seasons shoot: length of internode

The length of the internode is observed on the middle third on a current season shoot.

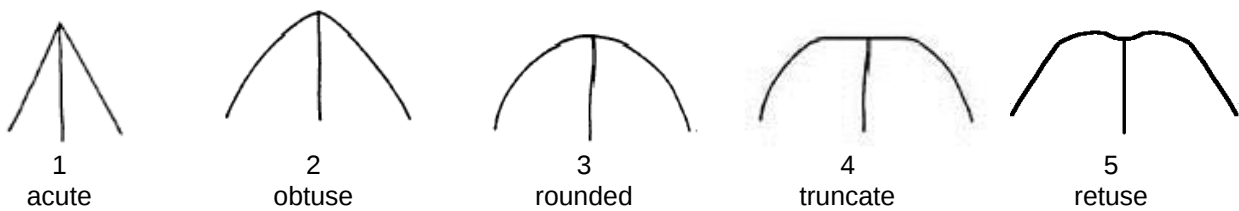
Ad. 6: Leaf blade: ratio length/width

Ad. 7: Leaf blade: shape

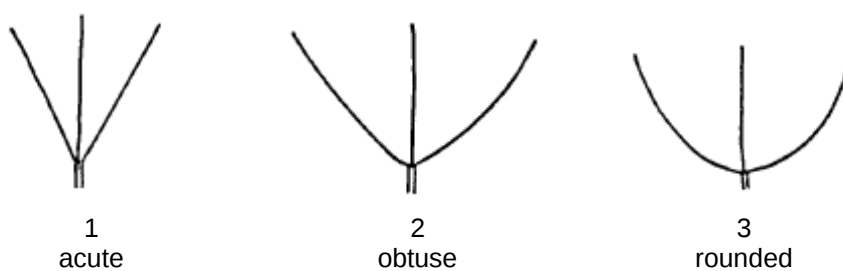
Ad. 8: Leaf blade: position of broadest part

		← broadest part →		
		below middle	at middle	above middle
high ↑ width (ratio length/width) ← low			 3 oblong	
			 2 elliptic	
		 1 ovate		 4 obovate

Ad. 9: Leaf blade: shape of apex



Ad. 10: Leaf blade: shape of base



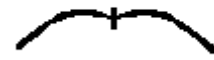
Ad. 11: Leaf blade: profile in cross section



1
concave



2
flat



3
convex

Ad. 12: Leaf blade: main color of upper side

The main color is the color with the largest surface area present on the inner side of a leaf. In cases where the areas of the main and secondary colors are too similar to reliably decide which color has the largest area of the blade, the darkest color is considered to be the main color.

Ad.14: Leaf blade: color of lower side

The color of the lower side includes any pubescence that may be present.

Ad. 17: Petal: color of upper side

The observation is made on the color covering the largest surface area of the petal.

Ad. 18: Stamens: number



1
few



2
medium



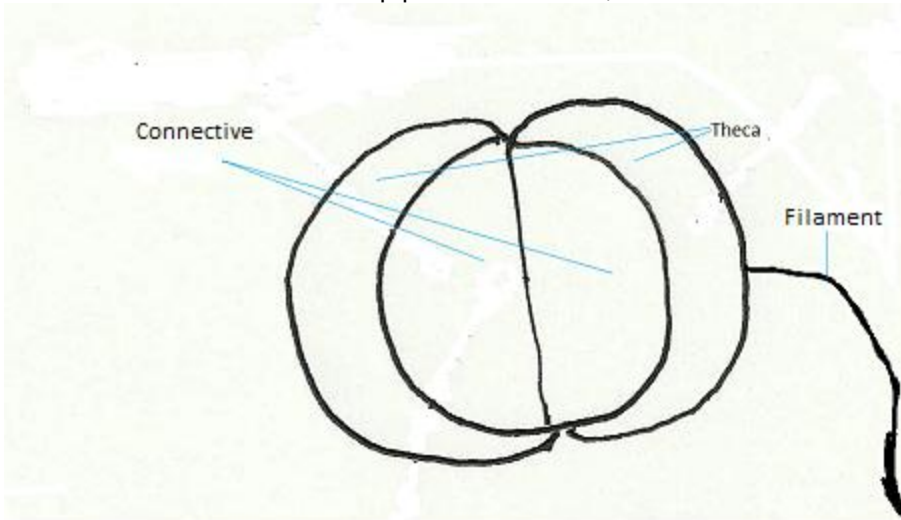
3
many

Ad. 20: Anthers: color of theca

Ad. 21: Anthers: color of connective

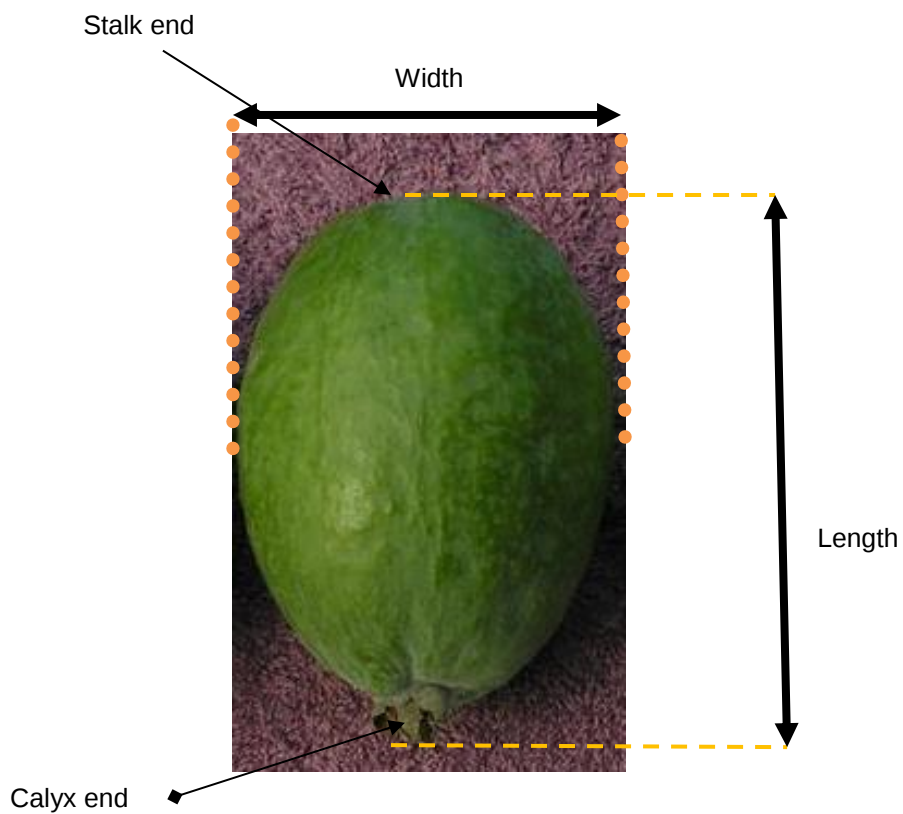
The theca is the covering or sheath of an anther consisting of two halves.

The connective is the top part of the anther, between the two halves of the theca.

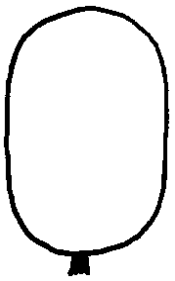
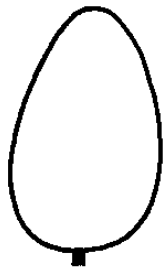
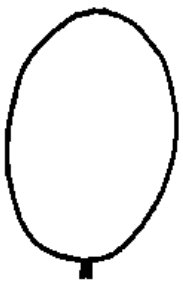
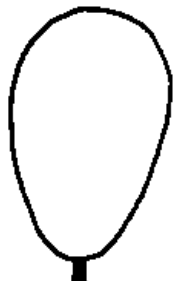
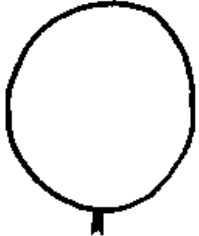


Ad. 25: Fruit: length

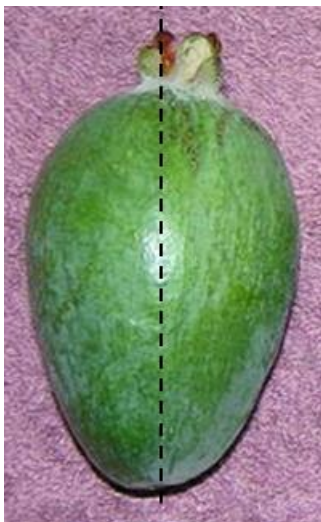
Ad. 26: Fruit: width



Ad. 27: Fruit: ratio length/width
Ad. 28: Fruit: shape

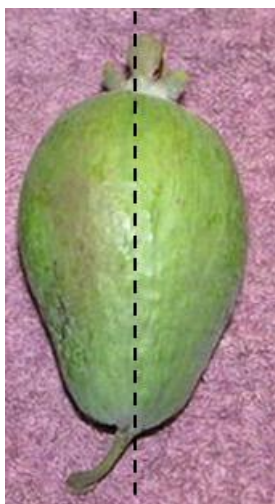
		←	broadest part	→
		below middle	at middle	above middle
medium (ratio length/width)	high		 5 rhombic	 7 oblanceolate
			 4 oblong	
		 1 ovate	 3 elliptic	 6 obovate
low			 2 circular	

Ad. 29: Fruit: longitudinal symmetry



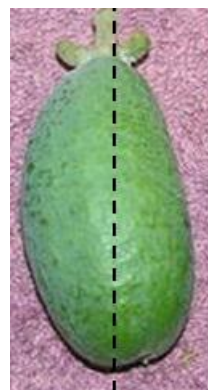
1

symmetric or slightly asymmetric



2

moderately asymmetric



3

strongly asymmetric

Ad. 30: Fruit: slope of shoulder at stalk end



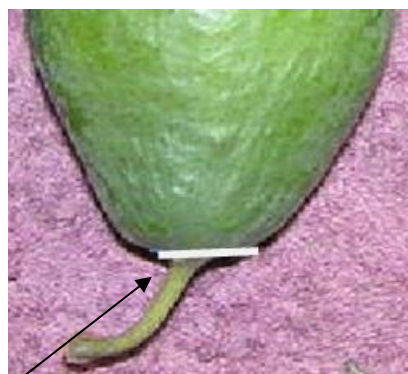
1

weak



2

medium



3

strong

Shoulder

Ad. 31: Fruit: point of attachment of stalk



1
depressed



2
flat



3
raised

Ad. 34: Fruit: rugosity of skin

Rugosity of the fruit is defined as the number of wrinkles. The wrinkles are irregular and net like. A variety with a rough fruit surface has greater rugosity than a variety with a smoother skin surface.

Ad. 35: Fruit: longitudinal grooving



1
absent or weak



2
medium



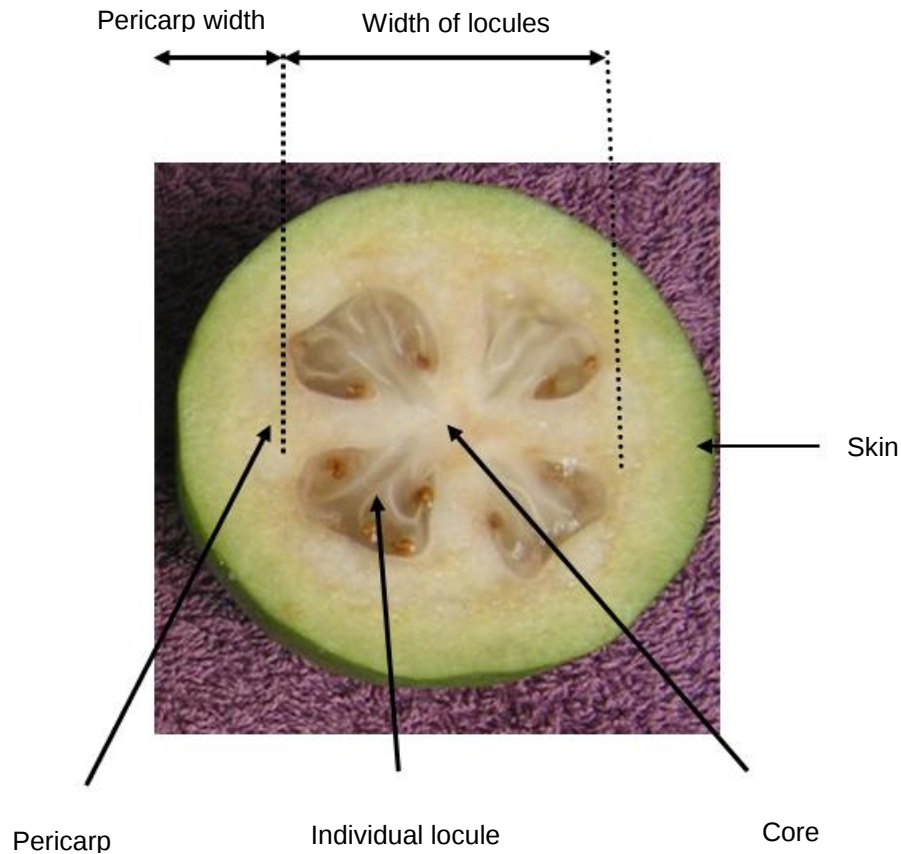
3
strong

Ad. 36: Fruit: thickness of skin

Ad. 37: Fruit: thickness of pericarp

Ad. 39: Fruit: width of locules relative to fruit

The thickness of the pericarp is the broadest width of flesh from the edge of the locule to the skin.



Ad. 42: Time of harvest maturity

Harvest maturity is reached when fruit naturally drops from the tree or is picked when readily detached from the tree with minimal effort. The harvest period begins when the first few fruit have naturally dropped. Maturity of the fruit cannot be determined by observation of external fruit characteristics only.

9. Literature

Thorp, G., Bieleski, R. 2002: Feijoas: Origins, Cultivation and Uses. Horticulture and Food Research Institute of New Zealand and David Bateman Ltd, Auckland, NZ

10. Technical Questionnaire

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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	Application date: (not to be filled in by the applicant)
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TECHNICAL QUESTIONNAIRE
to be completed in connection with an application for plant breeders' rights

1. Subject of the Technical Questionnaire

1.1	Botanical name	<i>Acca sellowiana</i>
1.2	Common name	Feijoa, Pineapple Guava

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:
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#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)

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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4.2 Method of propagating the variety

4.2.1 Vegetative propagation

- (a) cuttings []
- (b) grafting []
- (c) *in vitro* propagation []
- (d) other (state method) []

4.2.2 Other []
(please provide details)

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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5. Characteristics of the variety to be indicated (the number in brackets refers to the corresponding characteristic in Test Guidelines; please mark the note which best corresponds).

Characteristics	Example Varieties	Note
5.1 Tree: growth habit (1)		
upright	Apollo, Marion	1[]
semi-upright	Kakapo, SCS411 Alcantara, Unique	2[]
spreading	Pounamu, SCS412 Helena	3[]
5.2 Leaf blade: variegation on upper side (13)		
absent		1[]
present		9[]
5.3 Fruit: weight (24)		
very low		1[]
very low to low		2[]
low	Apollo, Opal Star	3[]
low to medium		4[]
medium	Pounamu, SCS411 Alcantara	5[]
medium to high		6[]
high	Anilvinkoru, SCS412 Helena	7[]
high to very high		8[]
very high		9[]
5.4 Fruit: shape (28)		
ovate	Pounamu	1[]
circular		2[]
elliptic	Opal Star, SCS411 Alcantara	3[]
oblong		4[]
rhombic		5[]
obovate	Gemini, Kakapo, SCS412 Helena	6[]
oblanceolate		7[]

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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Characteristics	Example Varieties	Note
5.5 (33) Fruit: color of skin		
light green	Unique	1[]
medium green	Apollo, Opal Star, SCS411 Alcantara	2[]
dark green	Anilvinkoru, Kakapo	3[]
grey green	Marion	4[]
5.6 (34) Fruit: rugosity of skin		
smooth or very slight	Opal Star, SCS412 Helena	1[]
very slight to slight		2[]
slight	Kakapo, Marion	3[]
slight to moderate		4[]
moderate	Apollo, SCS411 Alcantara, Triumph	5[]
moderate to strong		6[]
strong	Unique	7[]
strong to very strong		8[]
very strong		9[]
5.7 (42) Time of harvest maturity		
very early	Waitui	1[]
very early to early		2[]
early	Unique	3[]
early to medium		4[]
medium	Apollo, Gemini	5[]
medium to late		6[]
late	Kakapo, Opal Star	7[]
late to very late		8[]
very late	Triumph	9[]

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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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
<i>Example</i>	<i>Fruit: weight</i>	<i>low</i>	<i>medium</i>
Comments:			

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