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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

Geneva

DRAFT

GRANADILLA, PASSION FRUIT *

UPOV Code(s): PASSI_EDU

Passiflora edulis Sims

GUIDELINES

FOR THE CONDUCT OF TESTS

FOR DISTINCTNESS, UNIFORMITY AND STABILITY

prepared by an expert from Australia

to be considered by the

*Technical Working Party for Fruit Crops at its fifty-seventh session,
to be held in Leipzig, Germany, from 2026-09-07 to 2026-09-10*

Disclaimer: this document does not represent UPOV policies or guidance

Alternative Names:*

Botanical name	English	French	German	Spanish
<i>Passiflora edulis</i> Sims	Granadilla, Passion fruit	Barbadine, Fruit de la passion	Passionsfrucht, Purpurgranadilla	Granadilla, Maracuyá

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 *Passiflora edulis* Sims.

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 rooted cuttings or vegetatively propagated young plants.

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

5 rooted cuttings or 5 vegetatively propagated young plants.

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 two independent growing cycles may be observed from a single planting, examined in two separate growing cycles.

3.1.3 The growing cycle is considered to be the period ranging from the beginning of active vegetative growth or flowering, continuing through active vegetative growth or flowering and fruit development and concluding with the harvesting of fruit.

3.1.4 In particular, it is essential that the plants produce a satisfactory crop of fruit in each of the two growing cycles.

3.1.5 To ensure satisfactory crop of good quality fruits, four freshly opened flowers from each of the five plants should be hand pollinated and marked. Fruit developed from these flowers should be used for assessing fruit characteristics.

3.1.6 The testing of a variety may be concluded when the competent authority can determine with certainty the outcome of the test.

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.

3.4 *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 or 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 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 These Test Guidelines have been developed for the examination of vegetatively propagated varieties. For varieties with other types of propagation, the recommendations in the General Introduction and document TGP/13 "Guidance for new types and species" Section 4.5 "Testing Uniformity" should be followed.

4.2.3 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 seed or 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) Flower: number of anthocyanin spots on style (characteristic 35)
- (b) Fruit: height (characteristic 37)
- (c) Fruit: color of skin (characteristic 42)
- (d) Fruit: weight (characteristic 44)
- (e) Fruit: color of pulp (characteristic 45)
- (f) Plant: self-incompatibility (characteristic 48)

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 All relevant states of expression are presented in the characteristic.

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

English				français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
1	2	3	4	5	6	7			
		Name of characteristics in English		Nom du caractère en français		Name des Merkmals auf Deutsch	Nombre del carácter en español		
		states of expression		types d'expression		Ausprägungsstufen	tipos de expresión		

- 1 Characteristic number
- 2 (*) Asterisked characteristic – see Chapter 6.1.2
- 3 Type of expression
 QL Qualitative characteristic – see Chapter 6.3
 QN Quantitative characteristic – see Chapter 6.3
 PQ Pseudo-qualitative characteristic – see Chapter 6.3
- 4 Method of observation (and type of plot, if applicable)
 MG, MS, VG, VS – see Chapter 4.1.5
- 5 (+) See Explanations on the Table of Characteristics in Chapter 8.2
- 6 (a)-(e) See Explanations on the Table of Characteristics in Chapter 8.1
- 7 Not applicable

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

		English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
1.		QN	VG	(+)					
	Plant: vigor								
	very weak							Lacey	1
	weak							Misty Gem	2
	medium							Tango	3
	strong							Flamenco	4
	very strong							Toms Special	5
2.		PQ	VG	(+)					
	Shoot: color								
	light green							Nellie Kelly Black, Summer Queen	1
	medium green							Misty Gem	2
	dark green							Charité, Ester	3
	greenish purple								4
	purple							Panama Gold	5
3.		QN	VG		(a)				
	Plant: proportion of leaves with three lobes								
	absent or very few							OPA6/19	1
	few								2
	medium							OPA4/19	3
	many							Misty Gem	4
	very many							Flamenco, Toms Special	5
4.		QN	VG						
	Stipules: anthocyanin coloration								
	absent or weak							Flamenco	1
	medium								2
	strong							Panama Gold	3
5.		QN	VG						
	Leaf blade: blistering								
	absent or weak							Panama Gold	1
	medium							Panama Red	2
	strong							Nellie Kelly Black	3

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
6.		QN	MG/MS/VG	(+)	(a)		
	Leaf blade: length						
	very short						1
	very short to short						2
	short					Lacey	3
	short to medium					Sweetheart	4
	medium					Flamenco, Misty Gem	5
	medium to long					Panama Red	6
	long					OPA3/19, OPA4/19	7
	long to very long					OPA12/19	8
	very long					OPA6/19	9
7.		QN	MG/MS/VG	(+)	(a)		
	Leaf blade: width						
	very narrow						1
	very narrow to narrow						2
	narrow					E23	3
	narrow to medium					Lacey	4
	medium					Misty Gem, Toms Special	5
	medium to broad					Flamenco	6
	broad					OPA13/19, Tango	7
	broad to very broad					OPA3/19	8
	very broad						9
8.		QN	MG/MS/VG	(+)	(a)		
	Trilobate leaf blade: width of the middle lobe						
	very narrow						1
	very narrow to narrow						2
	narrow					Lacey, Sweetheart	3
	narrow to medium					E23, Toms Special	4
	medium					Misty Gem	5
	medium to broad					OPA5/19, OPA7/19	6
	broad					OPA11/19, OPA4/19	7
	broad to very broad					McGuffies Red, OPA3/19	8
	very broad					OPA12/19	9

		English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
9.		QN	VG		(a)				
	Leaf blade: intensity of green color of upper side								
	very light								1
	light							Lacey	2
	medium							McGuffies Red, Pandora	3
	dark							Sweetheart, Tango	4
	very dark							OPA6/19	5
10.		QN	VG		(a)				
	Leaf blade: glossiness of upper side								
	weak							E23	1
	medium							Flamenco, Tango	2
	strong							OPA6/19, Sweetheart	3
11.		PQ	VG	(+)	(a)				
	Leaf blade: shape of base								
	acute								1
	obtuse								2
	truncate								3
	weakly cordate							OPA4/19	4
	strongly cordate							Flamenco, Misty Gem	5
12.		QN	MG/MS/VG	(+)	(a)				
	Trilobate leaf: depth of sinus								
	absent or very shallow							OPA6/19	1
	shallow								2
	medium							Panama Red	3
	deep							Panama Gold	4
	very deep								5

		English		français		deutsch		español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
13.		QN	MG/MS/VG		(a)					
	Petiole: length									
	very short									1
	very short to short									2
	short								Tango, Toms Special	3
	short to medium								Misty Gem, OPA13/19	4
	medium								Flamenco, OPA3/19	5
	medium to long								McGuffies Red, OPA4/19	6
	long								OPA11/19, OPA7/19	7
	long to very long								OPA12/19	8
	very long									9
14.		QN	VG		(a)					
	Petiole: anthocyanin coloration									
	absent or weak								Misty Gem, Toms Special	1
	medium								Lacey, McGuffies Red	2
	strong								Panama Gold	3
15.	(*)	QL	VG	(+)	(a)					
	Petiole: position of nectaries									
	adjacent to the base of the leaf blade								Flamenco, Lacey	1
	distant from the base of the leaf blade								E23, OPA3/19	2
16.		QN	MG/MS/VG		(b)					
	Flower: length of pedicel									
	very short									1
	short								Lacey	2
	medium								Misty Gem	3
	long								Flamenco, Toms Special	4
	very long								OPA11/19, Sweetheart	5
17.		QN	MG/MS/VG		(b), (c)					
	Flower: length of bracts									
	very short									1
	short								Lacey, Misty Gem	2
	medium								OPA3/19, Toms Special	3
	long								McGuffies Red, OPA6/19	4
	very long								OPA12/19, Sweetheart	5

	English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
18.	QN	MG/MS/VG		(b), (c)				
	Flower: width of bracts							
	very narrow							1
	narrow						Flamenco, OPA13/19	2
	medium						McGuffies Red, Pandora	3
	broad						OPA7/19, Tango	4
	very broad						OPA6/19	5
19.	QL	VG		(b)				
	Flower: nectaries on bracts							
	absent							1
	present						Misty Gem	9
20.	QL	VG		(b)				
	Flower: color of nectaries on bracts							
	green						Lacey	1
	purple						OPA7/19	2
21.	QN	MG/MS/VG		(b), (c)				
	Flower: length of sepals							
	very short							1
	short						Lacey	2
	medium						Misty Gem, Sweetheart	3
	long						OPA11/19	4
	very long							5
22.	QN	MG/MS/VG		(b), (c)				
	Flower: width of sepals							
	very narrow							1
	narrow						OPA5/19	2
	medium						Lacey, Misty Gem	3
	broad						OPA11/19	4
	very broad							5

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
23.		QN	MG/MS/VG	(b), (c)			
	Flower: length of petals						
	very short						1
	short					OPA5/19	2
	medium					Flamenco, Sweetheart	3
	long					McGuffies Red, Panama Red	4
	very long						5
24.		QN	MG/MS/VG	(b), (c)			
	Flower: width of petals						
	very narrow						1
	narrow					Lacey, OPA3/19	2
	medium					Flamenco, Sweetheart	3
	broad					Toms Special	4
	very broad						5
25.		QN	MG/MS/VG	(b), (d)			
	Flower: length of androgynophore						
	very short						1
	short					Lacey, Misty Gem	2
	medium					OPA12/19, Toms Special	3
	long					Flamenco, OPA3/19	4
	very long						5
26.		QN	VG	(+)	(b)		
	Flower: intensity of purple color on inner filaments in throat						
	absent or light					Flamenco	1
	medium					OPA3/19, Toms Special	2
	dark					OPA12/19	3
27.		QN	MG/MS/VG	(+)	(b)		
	Flower: width of purple color on filaments						
	absent or very narrow						1
	narrow					OPA7/19	2
	medium					OPA5/19, Sweetheart	3
	broad					OPA12/19	4
	very broad						5

		English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
28.		QN	MG/MS/VG	(+)	(b)				
	Flower: diameter of corona including filaments								
	very small								1
	small						Lacey		2
	medium						Misty Gem, Sweetheart		3
	large						OPA12/19		4
	very large								5
29.	(*)	QN	VG		(b)				
	Flower: intensity of color of purple rings on corona filaments								
	light						OPA7/19		1
	medium						Lacey, Misty Gem		2
	dark						OPA12/19		3
30.		QN	MG/MS/VG	(+)	(b)				
	Anther: length								
	short								1
	medium						Flamenco, Misty Gem		2
	long						OPA11/19, OPA12/19		3
31.		QN	MG/MS/VG	(+)	(b)				
	Anther: width								
	narrow								1
	medium						Sweetheart, Toms Special		2
	broad						OPA13/19, OPA4/19		3
32.		QN	MG/MS/VG		(b), (d)				
	Ovary: length								
	short						E23		1
	medium						Flamenco, Sweetheart		2
	long						OPA11/19, Toms Special		3
33.		QN	MG/MS/VG		(b), (d)				
	Ovary: width								
	narrow						E23		1
	medium						Flamenco, Sweetheart		2
	broad						OPA11/19, Toms Special		3

		English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
34.		QN	VG		(b)				
	Flower: number of anthocyanin spots on filament								
	absent or very few								1
	few							Flamenco, Toms Special	2
	medium							OPA11/19, Sweetheart	3
	many							Lacey, OPA3/19	4
	very many								5
35.	(*)	QN	VG	(+)	(b)				
	Flower: number of anthocyanin spots on style								
	absent or few							Lacey, OPA11/19	1
	medium							OPA5/19, OPA7/19	2
	many							OPA3/19	3
36.		QN	VG		(b)				
	Flower: number of anthocyanin spots on androgynophore								
	absent or few							Lacey, OPA13/19, OPA3/19	1
	medium							OPA4/19, Sweetheart	2
	many							Flamenco, Toms Special	3
37.	(*)	QN	MG/MS/VG	(+)	(e)				
	Fruit: height								
	very short								1
	very short to short								2
	short							E23, Lacey	3
	short to medium								4
	medium							Flamenco, OPA13/19	5
	medium to tall								6
	tall							McGuffies Red, OPA11/19	7
	tall to very tall								8
	very tall							Golden Giant	9

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
38.		QN	MG/MS/VG	(+)	(e)		
	Fruit: diameter						
	very small						1
	very small to small						2
	small					E23, Lacey	3
	small to medium						4
	medium					Flamenco, Pandora	5
	medium to large						6
	large					OPA12/19	7
	large to very large						8
	very large					Golden Giant	9
39.		QN	MG/MS/VG		(e)		
	Fruit: ratio height/diameter						
	very low						1
	low						2
	medium					Lacey, OPA3/19	3
	high					McGuffies Red	4
	very high						5
40.		PQ	VG	(+)	(e)		
	Fruit: shape in longitudinal view						
	oblate					BRS GA1	1
	obtuse ovate					Panama Red	2
	circular					Lacey, Misty Gem, OPA3/19	3
	obovate						4
	acute ovate					Pandora	5
	broad elliptical					McGuffies Red, OPA6/19	6
	narrow elliptical						7
41.		QN	VG		(e)		
	Fruit: number of lenticels						
	absent or very few						1
	few					McGuffies Red	2
	medium					OPA6/19	3
	many					Pandora	4
	very many					Misty Gem, Panama Red	5

		English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
42.	(*)	PQ	VG		(e)				
	Fruit: color of skin								
	green								1
	light yellow								2
	medium yellow							Brazilian Gold, Inca Gold	3
	dark yellow							Panama Gold	4
	reddish orange								5
	red							McGuffies Red	6
	reddish purple							Sweetheart, Toms Special	7
	medium purple							Misty Gem, Tango	8
	dark purple							Nellie Kelly Black	9
43.		QN	MG/MS/VG	(+)	(e)				
	Fruit: thickness of skin								
	very thin								1
	very thin to thin								2
	thin							OPA6/19	3
	thin to medium								4
	medium							E23, Flamenco, Misty Gem	5
	medium to thick								6
	thick							OPA3/19, Pandora	7
	thick to very thick								8
	very thick							OPA12/19	9
44.	(*)	QN	MG/MS	(+)					
	Fruit: weight								
	very low							E23	1
	very low to low								2
	low							Lacey, Misty Gem	3
	low to medium								4
	medium							Flamenco, OPA3/19, OPA5/19	5
	medium to high								6
	high							McGuffies Red, OPA12/19	7
	high to very high								8
	very high							Golden Giant	9

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
45.	(*)	PQ	VG	(e)			
	Fruit: color of pulp						
	whitish						1
	greenish yellow						2
	yellow					McGuffies Red, Misty Gem	3
	yellowish orange					E23, Flamenco	4
	orange					OPA3/19	5
46.	(*)	QN	MG/MS	(e)			
	Fruit: weight of pulp including seeds						
	very low					E23	1
	very low to low						2
	low					Misty Gem	3
	low to medium						4
	medium					Flamenco, McGuffies Red, Pandora	5
	medium to high						6
	high					OPA6/19, OPA7/19	7
	high to very high						8
	very high						9
47.		QN	MG/VG	(+)	(e)		
	Fruit: sweetness of pulp						
	very low						1
	very low to low						2
	low					E23	3
	low to medium					Panama Red	4
	medium					Flamenco	5
	medium to high					Misty Gem	6
	high					Pandora, Sweetheart	7
	high to very high					McGuffies Red	8
	very high					OPA6/19	9
48.	(*)	QL	VG	(+)			
	Plant: self-incompatibility						
	absent					Flamenco, Toms Special	1
	present					Panama Red	9

8. Explanations on the Table of Characteristics

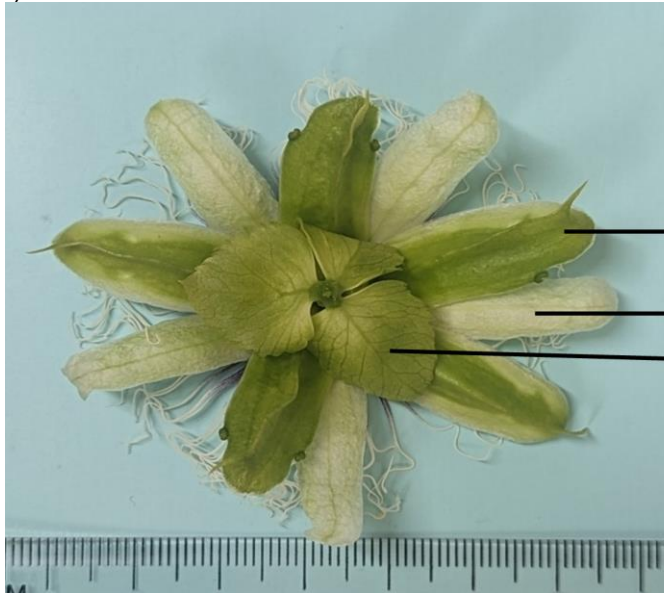
8.1 *Explanations covering several characteristics*

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

(a) Observations should be made on fully developed leaves from the middle third of vigorous shoots.

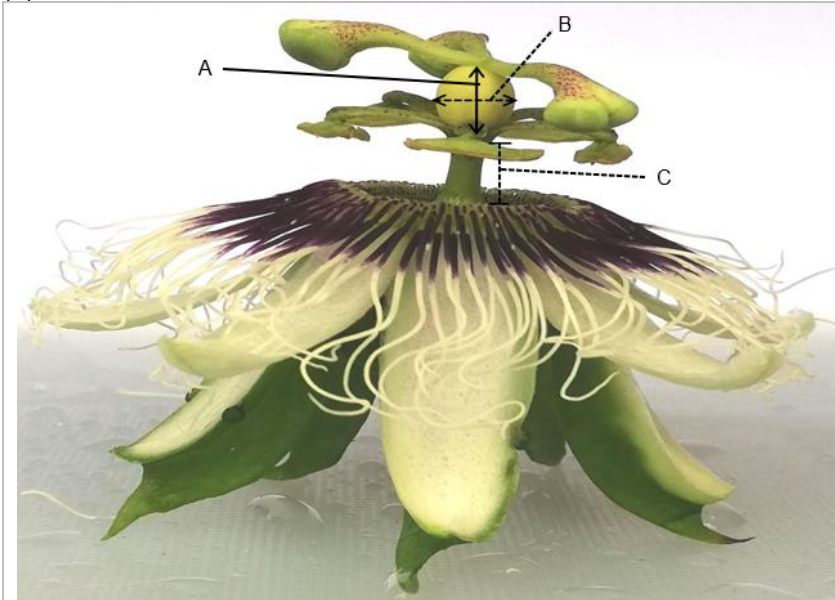
(b) Observations should be made on fully opened flowers.

(c)



A = Sepal
B = Petal
C = Bract

(d)



A = Ovary length
B = Ovary width
C = Androgynophore length

(e) Observations should be made when $\geq 75\%$ of the fruit skin has changed color.

8.2 Explanations for individual characteristics

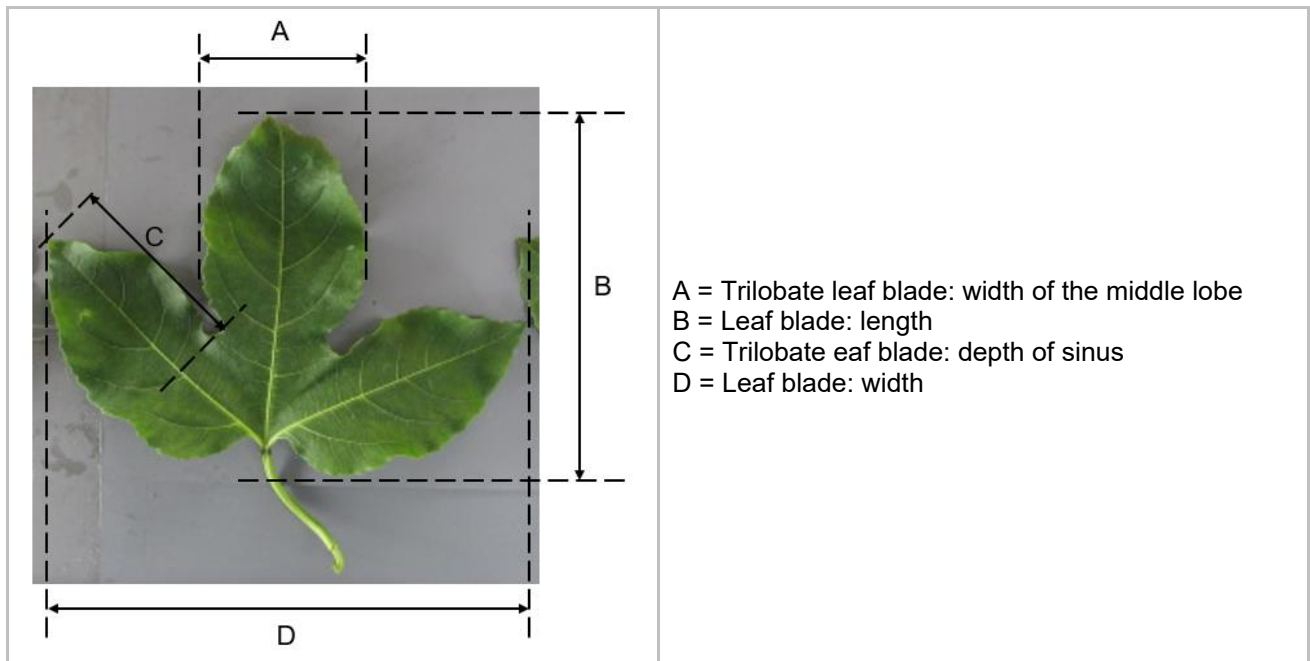
Ad. 1: Plant: vigor

The plant vigor should be considered as the overall abundance of vegetative growth.

Ad. 2: Shoot: color

Observations should be made on vigorous current season's shoots.

Ad. 6: Leaf blade: length



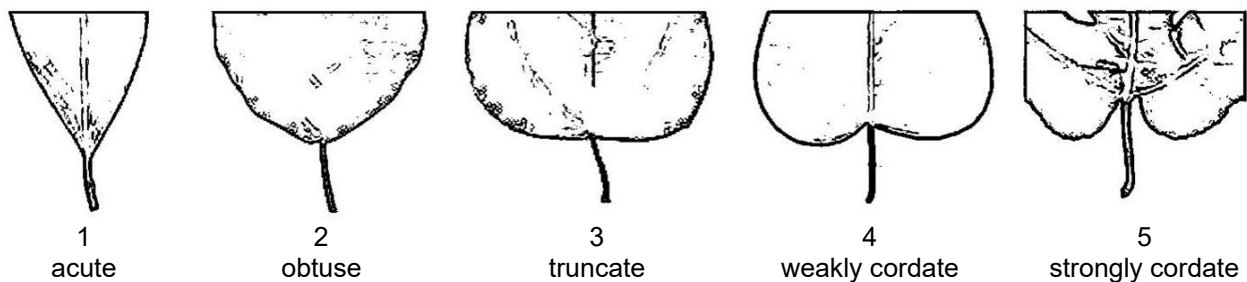
Ad. 7: Leaf blade: width

See Ad. 6

Ad. 8: Trilobate leaf blade: width of the middle lobe

See Ad. 6

Ad. 11: Leaf blade: shape of base

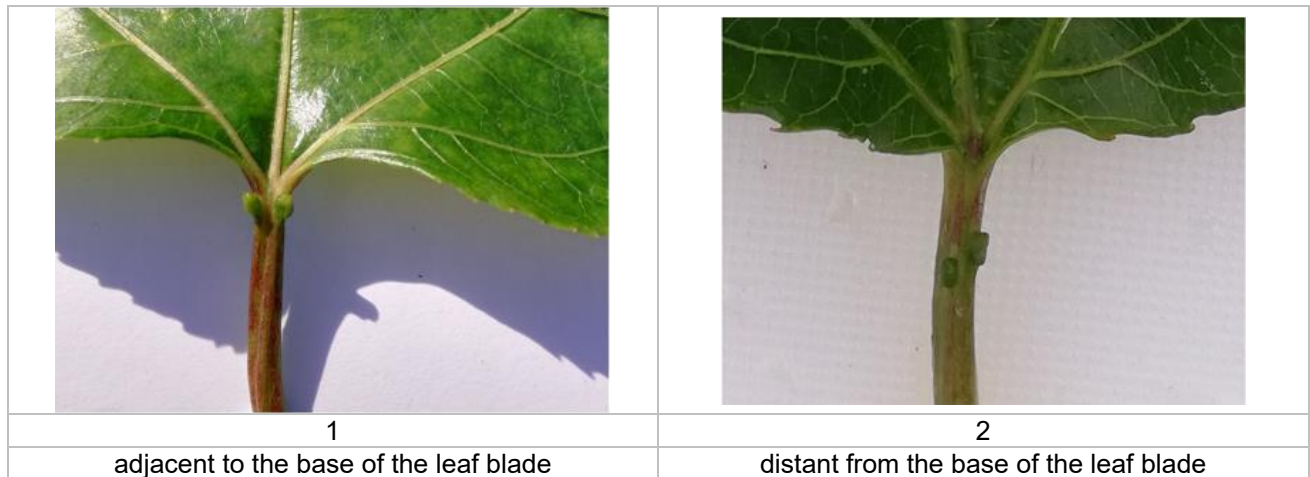


Ad. 12: Trilobate leaf: depth of sinus

See Ad. 6

Observations should be made on the deepest sinus.

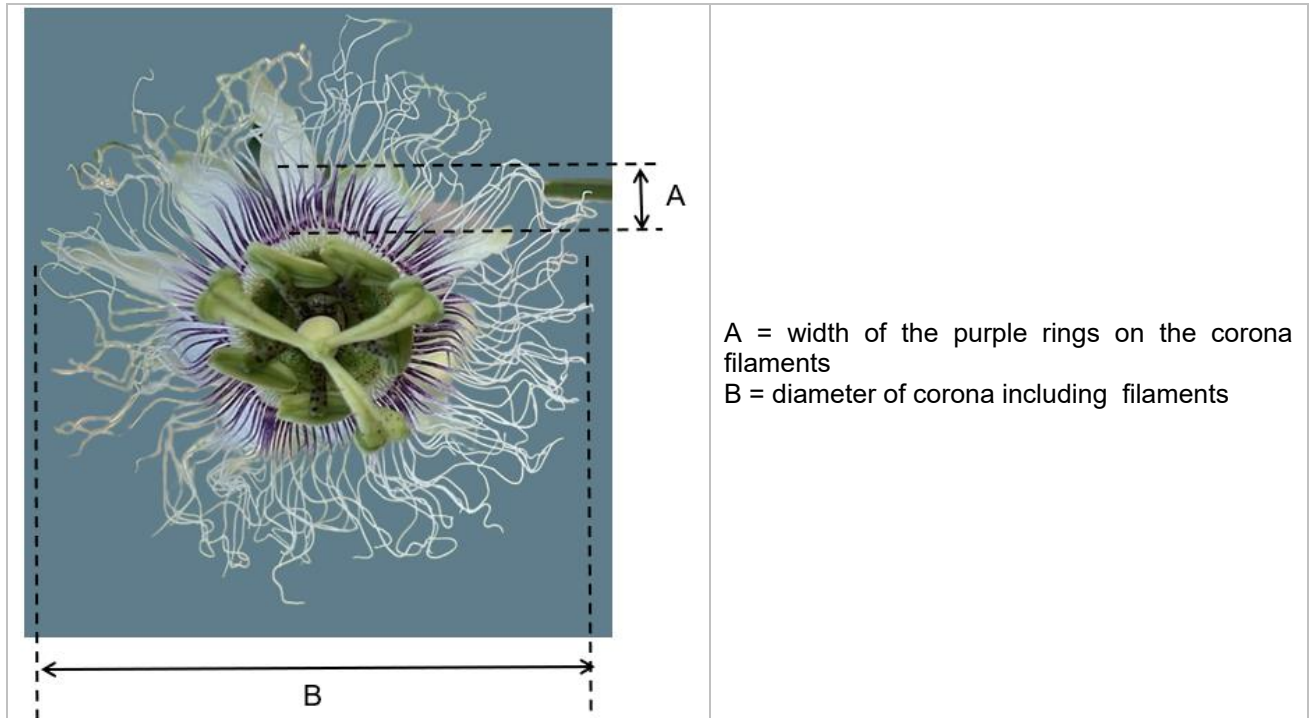
Ad. 15: Petiole: position of nectaries



Ad. 26: Flower: intensity of purple color on inner filaments in throat



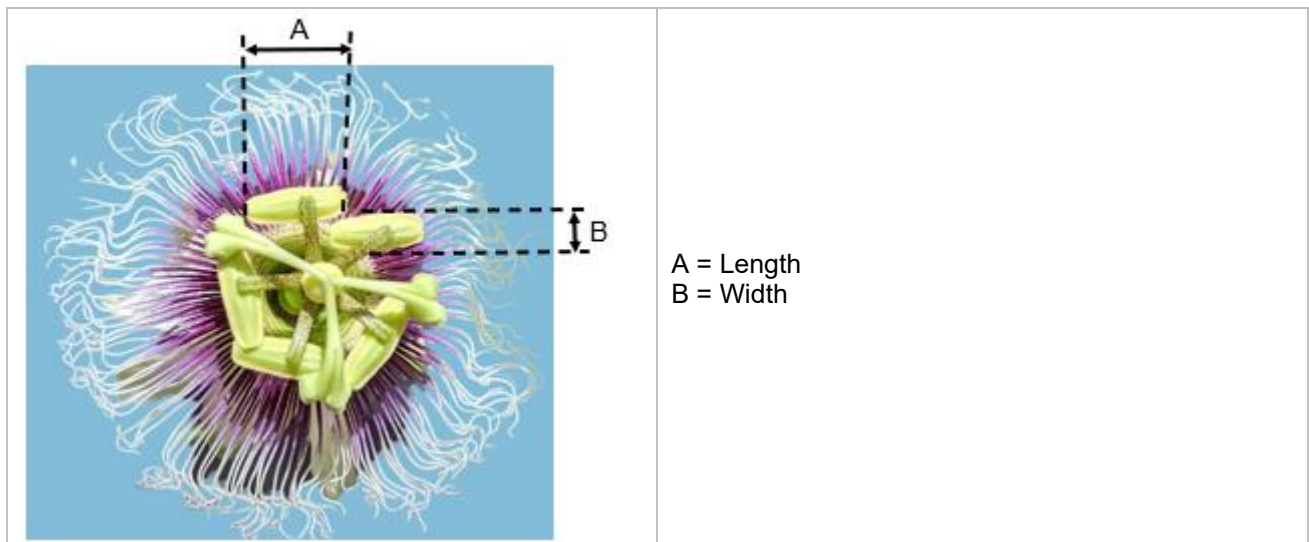
Ad. 27: Flower: width of purple color on filaments



Ad. 28: Flower: diameter of corona including filaments

See Ad. 27

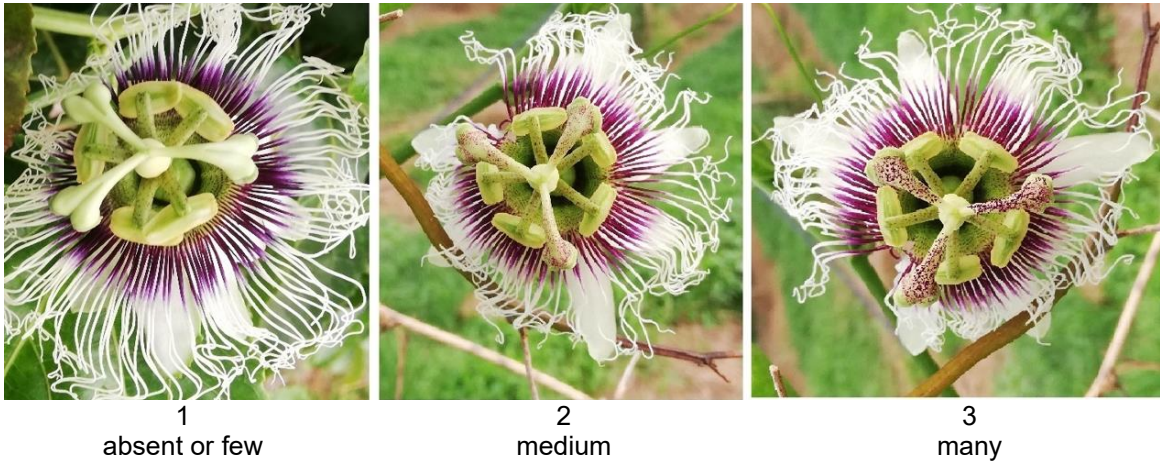
Ad. 30: Anther: length



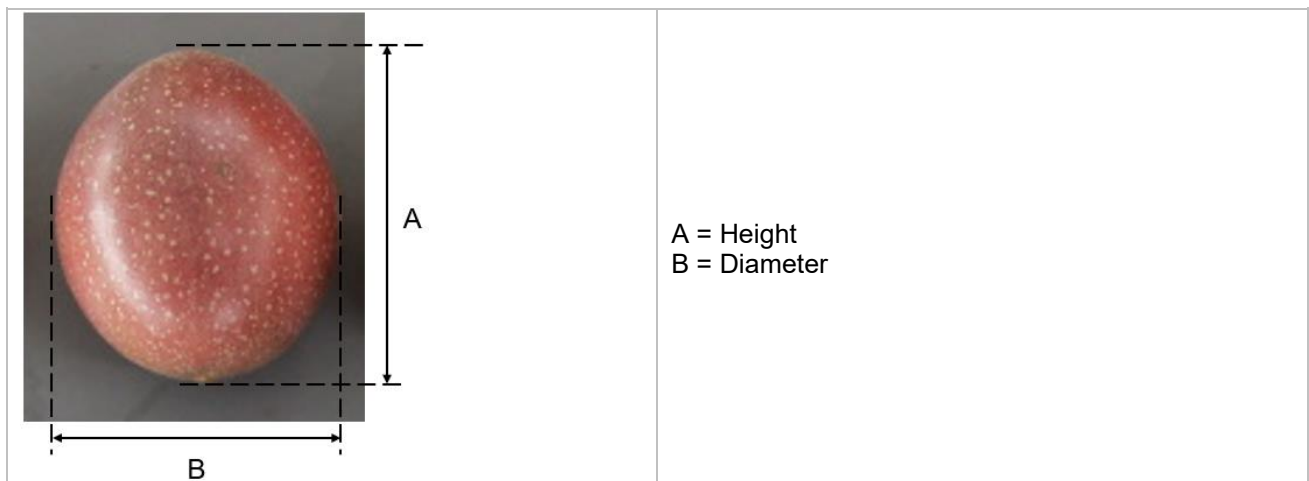
Ad. 31: Anther: width

See Ad. 30

Ad. 35: Flower: number of anthocyanin spots on style



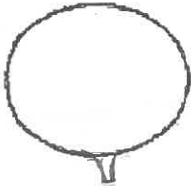
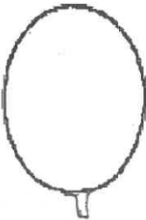
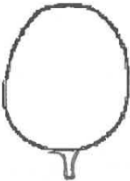
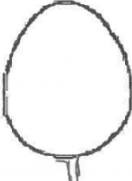
Ad. 37: Fruit: height



Ad. 38: Fruit: diameter

See Ad. 37

Ad. 40: Fruit: shape in longitudinal view

		ratio height/diameter			
		low	medium	high	
↑ broadest part ↓	above middle		 4 obovate		
	at middle	 1 oblate	 3 circular	 6 broad elliptical	 7 narrow elliptical
	below middle		 2 obtuse ovate	 5 acute ovate	

Ad. 43: Fruit: thickness of skin



Ad. 44: Fruit: weight

Observations should be made on freshly harvested fruit.

Ad. 47: Fruit: sweetness of pulp

The sweetness of pulp should be observed in degrees Brix.

Ad. 48: Plant: self-incompatibility

Observations should be made on 5 un-opened flowers which have been emasculated and bagged. On opening the flowers should be hand pollinated using fresh pollen from flowers of the same variety and re-bagged. Self-incompatibility is absent if the ovary of the pollinated flower is swollen and still attached to the plant 72 hours after pollination.

9. Literature

Jesus, O.N., Oliveira, E.J., Faleiro, F.G., Soares, T.L.S., and Girardi, E.A. (2017). Illustrated Morpho-agronomic Descriptors for *Passiflora* spp. Embrapa. Brasília, BR

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	Passiflora edulis Sims	
1.2 Common name	Granadilla, Passion fruit	
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 varieties)

--

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

--

4.1.4 Other
(Please provide details)

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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) *In vitro* propagation []
(c) Budding and grafting (please specify rootstock) []
(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 (35)	Flower: number of anthocyanin spots on style		
	absent or few	Lacey, OPA11/19	1 []
	medium	OPA5/19, OPA7/19	2 []
	many	OPA3/19	3 []
5.2 (37)	Fruit: height		
	very short		1 []
	very short to short		2 []
	short	E23, Lacey	3 []
	short to medium		4 []
	medium	Flamenco, OPA13/19	5 []
	medium to tall		6 []
	tall	McGuffies Red, OPA11/19	7 []
	tall to very tall		8 []
	very tall	Golden Giant	9 []
5.3 (42)	Fruit: color of skin		
	green		1 []
	light yellow		2 []
	medium yellow	Brazilian Gold, Inca Gold	3 []
	dark yellow	Panama Gold	4 []
	reddish orange		5 []
	red	McGuffies Red	6 []
	reddish purple	Sweetheart, Toms Special	7 []
	medium purple	Misty Gem, Tango	8 []
	dark purple	Nellie Kelly Black	9 []

TECHNICAL QUESTIONNAIRE		Page {x} of {y}	Reference Number:
Characteristics		Example Varieties	Note
5.4 (44)	Fruit: weight		
	very low	E23	1 []
	very low to low		2 []
	low	Lacey, Misty Gem	3 []
	low to medium		4 []
	medium	Flamenco, OPA3/19, OPA5/19	5 []
	medium to high		6 []
	high	McGuffies Red, OPA12/19	7 []
	high to very high		8 []
	very high	Golden Giant	9 []
5.5 (45)	Fruit: color of pulp		
	whitish		1 []
	greenish yellow		2 []
	yellow	McGuffies Red, Misty Gem	3 []
	yellowish orange	E23, Flamenco	4 []
	orange	OPA3/19	5 []
5.6 (48)	Plant: self-incompatibility		
	absent	Flamenco, Toms Special	1 []
	present	Panama Red	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: height</i>	<i>short</i>	<i>tall</i>

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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 photograph of the variety displaying its main distinguishing feature(s), should accompany the Technical Questionnaire. The photograph will provide a visual illustration of the candidate variety which supplements the information provided in the Technical Questionnaire.

The key points to consider when taking a photograph of the candidate variety are:

- Indication of the date and geographic location
- Correct labeling (breeder's reference)
- Good quality printed photograph (minimum 10 cm x 15 cm) and/or sufficient resolution electronic format version (minimum 960 x 1280 pixels)

Further guidance on providing photographs with the Technical Questionnaire is available in document TGP/7 "Development of Test Guidelines", Guidance Note 35 (<http://www.upov.int/tgp/en/>).

The link provided may be deleted by members of the Union when developing authorities' own test guidelines.

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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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.

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".

9.3 Has the plant material to be examined been tested for the presence of virus or other pathogens?

Yes ☐

(please provide details as specified by the Authority)

No ☐

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

Applicant's name

Signature

Date