



PROTOCOL FOR TESTS ON DISTINCTNESS, UNIFORMITY AND STABILITY

***Guzmania* Ruiz et Pav.**

GUZMANIA

UPOV Code: GUZMA

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TABLE OF CONTENTS

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1.	SUBJECT OF THE PROTOCOL AND REPORTING.....	3
1.1	Scope of the technical protocol.....	3
1.2	Entry into Force	3
1.3	Reporting between Examination Office and CPVO and Liaison with Applicant	3
2.	MATERIAL REQUIRED	3
2.1	Plant material requirements	3
2.2	Informing the applicant of plant material requirements.....	4
2.3	Informing about problems on the submission of material	4
3.	METHOD OF EXAMINATION.....	4
3.1	Number of growing cycles.....	4
3.2	Testing Place	4
3.3	Conditions for Conducting the Examination.....	4
3.4	Test design.....	4
3.5	Special tests for additional characteristics.....	4
3.6	Constitution and maintenance of a variety collection	5
4.	ASSESSMENT OF DISTINCTNESS, UNIFORMITY AND STABILITY	5
4.1	Distinctness	5
4.2	Uniformity	6
4.3	Stability.....	6
5.	GROUPING OF VARIETIES AND ORGANISATION OF THE GROWING TRIAL.....	7
6.	INTRODUCTION TO THE TABLE OF CHARACTERISTICS	7
6.1	Characteristics to be used	7
6.3	Example Varieties.....	8
6.4	Legend.....	8
7.	TABLE OF CHARACTERISTICS.....	9
8.	EXPLANATIONS ON THE TABLE OF CHARACTERISTICS.....	16
8.1	Explanations covering several characteristics	16
8.2	Explanations for individual characteristics	16
9.	LITERATURE	22
10.	TECHNICAL QUESTIONNAIRE	23

1. SUBJECT OF THE PROTOCOL AND REPORTING

1.1 Scope of the technical protocol

This Technical Protocol applies to all varieties of *Guzmania Ruiz et Pav.*

The protocol describes the technical procedures to be followed in order to meet the requirements of Council Regulation 2100/94 on Community Plant Variety Rights. The technical procedures have been agreed by the Administrative Council and are based on documents agreed by the International Union for the Protection of New Varieties of Plants (UPOV), such as the General Introduction to DUS (UPOV Document TG/1/3 http://www.upov.int/export/sites/upov/resource/en/tg_1_3.pdf), its associated TGP documents (<http://www.upov.int/tgp/en/>) and the relevant UPOV Test Guideline TG/182/4 dated 20/09/2018 (<https://www.upov.int/edocs/tgdocs/en/tg182.pdf>) for the conduct of tests for Distinctness, Uniformity and Stability.

1.2 Entry into Force

The present protocol enters into force on **01.04.2020**. Any ongoing DUS examination of candidate varieties started before the aforesaid date will not be affected by the approval of the Technical Protocol. Technical examinations of candidate varieties are carried out according to the TP in force when the DUS test starts. The starting date of a DUS examination is considered to be the due date for submitting of plant material for the first test period.

In cases where the Office requests to take-over a DUS report for which the technical examination has either been finalized or which is in the process to be carried out at the moment of this request, such report can only be accepted if the technical examination has been carried out according to the CPVO TP which was in force at the moment when the technical examination started.

1.3 Reporting between Examination Office and CPVO and Liaison with Applicant

1.3.1 Reporting between Examination Office and CPVO

The Examination Office shall deliver to the CPVO a preliminary report ("the preliminary report") no later than two weeks after the date of the request for technical examination by the CPVO.

The Examination Office shall also deliver to the CPVO a report relating to each growing period ("the interim report") and, when the Examination Office considers the results of the technical examination to be adequate to evaluate the variety or the CPVO so requests, a report relating to the examination ("the final report").

The final report shall state the opinion of the Examination Office on the distinctness, uniformity and stability of the variety. Where it considers those criteria to be satisfied, or where the CPVO so requests, a description of the variety shall be added to the report.

The interim and the final reports shall be delivered to the CPVO as soon as possible and no later than on the deadlines as laid down in the designation agreement.

1.3.2 Informing on problems in the DUS test

If problems arise during the course of the test the CPVO should be informed immediately so that the information can be passed on to the applicant. Subject to prior permanent agreement, the applicant may be directly informed at the same time as the CPVO particularly if a visit to the trial is advisable.

1.3.3 Sample keeping in case of problems

If the technical examination has resulted in a negative report, the CPVO shall inform the Examination Office as soon as possible in case that a representative sample of any relevant testing material shall be kept.

2. MATERIAL REQUIRED

2.1 Plant material requirements

Information with respect to the agreed closing dates and submission requirements of plant material for the technical examination of varieties can be found on <http://cpvo.europa.eu/applications-and-examinations/technical-examinations/submission-of-plant-material-s2-publication> in the special issue S2 of the Official Gazette of the Office. General requirements on submission of samples are also to be found following the same link.

2.2 Informing the applicant of plant material requirements

The CPVO informs the applicant that

- he is responsible for ensuring compliance with any customs and plant health requirements.
- the plant material supplied should be visibly healthy, not lacking in vigor, nor affected by any important pest or disease.
- 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.

2.3 Informing about problems on the submission of material

The Examination Office shall report to the CPVO immediately in cases where the test material of the candidate variety has not arrived in time or in cases where the material submitted does not fulfil the conditions laid down in the request for material issued by the CPVO.

In cases where the examination office encounters difficulties to obtain plant material of reference varieties the CPVO should be informed.

3. METHOD OF EXAMINATION

3.1 Number of growing cycles

The minimum duration of tests should normally be a single growing cycle.

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" http://www.upov.int/edocs/tgpdocs/en/tgp_9.pdf.

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.

Because daylight varies, colour determinations made against a colour 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 colour 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 20 plants in case of vegetative propagated varieties or at least 40 plants in case of seed propagated varieties.
- 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 Special tests for additional characteristics

In accordance with Article 23 of Implementing Rules N° 874/2009 an applicant may claim either in the Technical Questionnaire or during the test that a candidate has a characteristic which would be helpful in establishing distinctness. If such a claim is made and is supported by reliable technical data, a special test may be undertaken providing that a technically acceptable test procedure can be devised.

Special tests will be undertaken, with the agreement of the President of CPVO, where distinctness is unlikely to be shown using the characteristics listed in the protocol.

3.6 Constitution and maintenance of a variety collection

The process for the constitution and the maintenance of a variety collection can be summarized as follows:

Step 1: Making an inventory of the varieties of common knowledge

Step 2: Establishing a collection ("variety collection") of varieties of common knowledge which are relevant for the examination of distinctness of candidate varieties

Step 3: Selecting the varieties from the variety collection which need to be included in the growing trial or other tests for the examination of distinctness of a particular candidate variety.

3.6.1 Forms of variety collection

The variety collection shall comprise variety descriptions and may comprise living plant material. The variety description shall be produced by the EO unless special cooperation exists between EOs and the CPVO. The variety collection shall comprise images (e.g. photographs, illustrations or digitalized images) of representative parts of the plants of each variety, produced by the respective EO. The descriptive and pictorial information produced by the EO shall be held and maintained in a form of a database.

3.6.2 Living Plant Material

The EO shall obtain living plant material of reference varieties as and when those varieties need to be included in growing trials or other tests.

3.6.3 Making an inventory of varieties of common knowledge for inclusion in the variety collection

The inventory shall include varieties protected under National and Community PBR, varieties in trade or in commercial registers.

In addition to the above, the inventory shall be extended to the appropriate to:

- any commercial document in which varieties are marketed as propagating or harvested material, especially when there is no official registration system;
- any list including varieties which are publicly available within plant collections (varieties included in genetic resource collections, collection of old varieties, etc.);
- information provided by relevant plant experts;
- relevant example varieties referred to in the technical protocols

4. ASSESSMENT OF DISTINCTNESS, UNIFORMITY AND STABILITY

The prescribed procedure is to assess distinctness, uniformity and stability in a growing trial.

4.1 Distinctness

4.1.1 General recommendations

It is of particular importance for users of this Technical Protocol to consult the UPOV-General Introduction to DUS (link in chapter 1 of this document) and TGP 9 'Examining Distinctness' (http://www.upov.int/edocs/tgpdocs/en/tgp_9.pdf) prior to making decisions regarding distinctness. However, the following points are provided for elaboration or emphasis in this Technical Protocol.

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 Technical Protocols are familiar with the recommendations contained in the UPOV-General Introduction to DUS prior to making decisions regarding distinctness.

4.1.4 Number of plants/parts of plants to be examined

In the case of vegetative propagated varieties, unless otherwise indicated, for the purposes of distinctness, all observations on single plants should be made on 19 plants or parts taken from each of 19 plants and any other observations made on all plants in the test, disregarding any off-type plants.

In the case of seed-propagated varieties, unless otherwise indicated, for the purposes of distinctness, all observations on single plants should be made on 38 plants or parts taken from each of 38 plants and any other observation made on all plants in the test, disregarding any off-type plants.

4.1.5 Method of observation

The recommended method of observing the characteristic for the purposes of distinctness is indicated by the following key in the third 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 this Technical Protocol to consult the UPOV-General Introduction to DUS (link in chapter 1 of this document) and TGP 10 'Examining Uniformity' (http://www.upov.int/edocs/tgpdocs/en/tgp_10.pdf) prior to making decisions regarding uniformity. However, the following points are provided for elaboration or emphasis in this Technical Protocol:

4.2.2 This Technical Protocol has been developed for the examination of vegetative and seed propagated varieties.

For the assessment of uniformity of vegetative propagated varieties, a population standard of 1% an acceptance probability of at least 95 % should be applied. In the case of a sample size of 20 plants, 1 off-types is allowed.

For the assessment of uniformity of seed-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 40 plants, 2 off-types are allowed.

4.3 **Stability**

4.3.1 It is of particular importance for users of this Technical Protocol to consult the UPOV-General Introduction to DUS (link in chapter 1 of this document) and TGP 11 'Examining Stability' (http://www.upov.int/edocs/tgpdocs/en/tgp_11.pdf)

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 ORGANISATION 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 organise the growing trial so that similar varieties are grouped together.
- 5.3** The following have been agreed as useful grouping characteristics.
- a) Plant: height (characteristic 1)
 - b) Peduncle: secondary colour of bract (characteristic 20) with the following groups:
 - Gr 1: white
 - Gr 2: yellow
 - Gr 3: orange
 - Gr 4: red
 - Gr 5: purple red
 - Gr 6: purple
 - c) Inflorescence: position in relation to leaves (characteristic 22)
 - d) Floral bract: main colour of inner side (characteristic 32) with the following groups:
 - Gr 1: white
 - Gr 2: yellow
 - Gr 3: orange
 - Gr 4: red
 - Gr 5: purple red
 - Gr 6: purple
 - e) Floral bract: number of flowers per bract (characteristic 35)
- 5.4** If other characteristics than those from the Technical Protocol are used for the selection of varieties to be included into the growing trial, the EO shall inform the CPVO and seek the prior consent of the CPVO before using these characteristics.
- 5.5** Guidance for the use of grouping characteristics, in the process of examining distinctness, is provided through the UPOV-General Introduction to DUS and document TGP/9 "Examining Distinctness".

6. INTRODUCTION TO THE TABLE OF CHARACTERISTICS

6.1 Characteristics to be used

The characteristics to be used in DUS tests and preparation of descriptions shall be those referred to in the table of characteristics. All the characteristics shall be used, providing that observation of a characteristic is not rendered impossible by the expression of any other characteristic, or the expression of a characteristic is prevented by the environmental conditions under which the test is conducted or by specific legislation on plant health. In the latter case, the CPVO should be informed.

The Administrative Council empowers the President, in accordance with Article 23 of Commission Regulation N°874/2009, to insert additional characteristics and their expressions in respect of a variety.

6.2. States of expression and corresponding notes

In the case of qualitative and pseudo-qualitative characteristics, 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

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

6.3 Example Varieties

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

6.4 Legend

For column 'CPVO N°':

G	Grouping characteristic	-see Chapter 5
QL	Qualitative characteristic	
QN	Quantitative characteristic	
PQ	Pseudo-qualitative characteristic	
(+)	Explanations for individual characteristics	-see Chapter 8.2

For column 'UPOV N°':

The numbering of the characteristics is provided as a reference to the UPOV guideline.

(*)	UPOV Asterisked characteristic	-Characteristics that are important for the international harmonization of variety descriptions.
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For column 'Stage, method':

MG, MS, VG, VS		-see Chapter 4.1.5
(a)-(d)	Explanations covering several Characteristics	-see Chapter 8.1

7. TABLE OF CHARACTERISTICS

CPVO N°	UPOV N°	Stage, Method	Characteristics	Examples	Note		
1. (+)	1. (*)	MG/MS /VG	Plant: height				
			QN	(a)	short	Marcella	3
					medium	Torch	5
					tall	Magenta	7
G							
2. (+)	2. (*)	MG/MS /VG	Plant: width				
			QN		narrow	Empire	3
					medium	Tatiana	5
					broad	Rana	7
3. (+)	3. (*)	MG/MS /VG	Plant: number of leaves				
			QN		few	Duranik	3
					medium	Rana	5
					many	Taiga	7
4. (+)	4. (*)	MG/MS /VG	Leaf sheath: length				
			QN	(a), (b)	short	Cherry	1
					medium	Rana	2
					tall	Manzana	3
5. (+)	5. (*)	MG/MS /VG	Leaf sheath: width				
			QN	(a), (b)	narrow	Papilio	1
					medium	Cherry	2
					broad	Duracan	3
6. (+)	6. (*)	MG/MS /VG	Leaf blade: length				
			QN	(a), (b)	short	Victory	3
					medium	Torch	5
					long	Taiga	7

CPVO N°	UPOV N°	Stage, Method	Characteristics	Examples	Note		
7. (+)	7. (*)	MG/MS /VG	Leaf blade: width				
			QN	(a), (b)	narrow	Freeze	3
					medium	Luna	5
broad	Durafire	7					
8. (+)	8. (*)	VG	Leaf blade: shape of apex				
			PQ	(a), (b)	acuminate	Rana	1
					acute	Luna	2
obtuse	Neptunes	3					
9.	9. (*)	VG	Leaf blade: main colour of inner side				
			PQ	(a), (b), (c)	light green	Victory	1
					medium green	Torch	2
					dark green	Ostara	3
medium blue green		4					
10.	10. (*)	VG	Leaf blade: anthocyanin coloration of basal half of inner side				
			QN	(a), (b)	absent or very weak	Hilda	1
					weak	Flo	3
					medium	Francesca	5
					strong	Red Moon	7
very strong		9					
11.	11. (*)	VG	Leaf blade: variegation of inner side				
			QL	(a), (b)	absent	Victory	1
present	Durafire, Sue Anne	9					

CPVO N°	UPOV N°	Stage, Method	Characteristics	Examples	Note		
12.	12.	VG	Leaf blade: main colour of outer side				
			PQ	(a), (b), (c)	light green	Flava	1
					medium green	Torch	2
					dark green	Ostara	3
					medium blue green		4
13.	13. (*)	VG	Leaf blade: anthocyanin coloration of outer side				
			QN	(a), (b)	absent or very weak	Manzana	1
					weak	Sky	3
					medium	Fall	5
					strong	Francesca	7
					very strong		9
14.	14.	VG	Leaf blade: pattern of anthocyanin coloration of outer side				
			PQ	(a), (b)	as a flush	Amoretto	1
					in stripes	Duranik	2
					as a flush and in stripes	Combi	3
15. (+)	15.	MG/MS /VG	Peduncle: number of bracts				
			QN	(a)	few	Misty	3
					medium		5
					many	Mirador	7
16.	16. (*)	MG/MS /VG	Peduncle: length of bract				
			QN	(a), (d)	short	Misty	3
					medium	GUZ 008	5
					long	G9197	7

CPVO N°	UPOV N°	Stage, Method	Characteristics	Examples	Note		
17.	17.	MG/MS /VG	Peduncle: width of bract				
			QN	(a), (d)	narrow	Misty	3
					medium	GUZ 008	5
			broad	Sky	7		
18.	18.	VG	Peduncle: intensity of green colour of bract				
			QN	(a), (d)	light	Tinto	3
					medium	Rostara	5
			dark	Durajen	7		
19. (+)	19. (*)	VG	Peduncle: position of first bi-coloured bract				
			QN	(a)	at basal third	Revolution	1
					middle third	Rock	2
			at distal third	Tropix	3		
20.	20. (*)	VG	Peduncle: secondary colour of bract				
			G	PQ	(a), (c), (d)	RHS Colour Chart (indicate reference number)	
21.	21.	VG	Peduncle: area of secondary colour of bract				
			QN	(a), (d)	small		1
					medium		2
			large		3		
22.	22. (*)	VG	Inflorescence: position in relation to leaves				
			QN	(a)	below	Glossita	1
					same level	Durabel	2
G			above	Torch	3		

CPVO N°	UPOV N°	Stage, Method	Characteristics	Examples	Note		
23. (+)	23. (*)	MG/MS /VG	Inflorescence: length				
			QN	(a)	short	Victory	3
					medium	Continental	5
					long	Amoretto	7
24. (+)	24. (*)	MG/MS /VG	Inflorescence: length of flowering part				
			QN	(a)	short	Manzana	3
					medium	Amoretto	5
					long	Rana	7
25. (+)	25. (*)	MG/MS /VG	Inflorescence: diameter of flowering part				
			QN	(a)	small	Duranik	3
					medium	Manzana	5
					large	Durafire	7
26. (+)	26. (*)	MG/MS /VG	Inflorescence: number of floral bracts				
			QN	(a)	few	Rana	3
					medium	Victory	5
					many	Manzana	7
27. (+)	27. (*)	MG/MS /VG	Floral bracts: length				
			QN	(a)	short	Torch	3
					medium	Manzana	5
					long	Rana	7
28. (+)	28. (*)	MG/MS /VG	Floral bracts: width				
			QN	(a)	narrow	Flava	3
					medium	Cherry	5
					broad	Manzana	7

CPVO N°	UPOV N°	Stage, Method	Characteristics	Examples	Note			
29. (+)	29.	VG	Floral bract: width of apex					
				QN	(a)	narrow	Victory	1
						medium	Cherry	2
						broad	Torch	3
30.	30. (*)	VG	Floral bract: main colour of outer side					
				PQ	(a), (c)	RHS Colour Chart (indicate reference number)		
31.	31. (*)	VG	Floral bract: secondary colour of outer side					
				PQ	(a), (c)	RHS Colour Chart (indicate reference number)		
32.	32. (*)	VG	Floral bract: main colour of inner side					
				G	PQ	(a), (c)	RHS Colour Chart (indicate reference number)	
33.	33.	VG	Floral bract: secondary colour of inner side					
				PQ	(a), (c)	RHS Colour Chart (indicate reference number)		
34. (+)	34.	VG	Floral bract: curvature of longitudinal section					
				QN	(a)	straight	Durajul	1
						slightly recurved	Techno	2
						moderately recurved	Hasta la Vista	3
						strongly recurved	Duratat	4
35. (+)	35. (*)	MG/MS /VG	Floral bract: number of flowers per bract					
				QN	(a)	few	Techno	3
						medium	Rana	5
				G		many	Continental	7

CPVO N°	UPOV N°	Stage, Method	Characteristics	Examples	Note
36. (+)	36. QN	MG/VG (a)	Prophyll: length		
			short	Soledo	1
			medium	Continental	2
			long	Cherry	3
37. (+)	37. QN	MG/VG (a)	Prophyll: width		
			narrow	Manzana	1
			medium	Rana	2
			broad	Continental	3
38.	38. PQ	VG (a), (c)	Prophyll: main colour		
			RHS Colour Chart (indicate reference number)		
39. (+)	39. (*) PQ	VG (a)	Flower: colour of the apex of the corolla		
			RHS Colour Chart (indicate reference number)		
40.	40. PQ	VG (a)	Ovary: colour		
			white	Victory	1
			yellow	Duracla	2
			green	Torch	3
41.	41. PQ	VG (a)	Style: colour of distal half		
			white	Manzana	1
			yellow	Kenbro4910	2
			green		3
42.	42. PQ	VG (a)	Stigma: colour		
			white	Victory	1
			yellow	Torch	2
			green	Soledo	3

8. EXPLANATIONS ON THE TABLE OF CHARACTERISTICS

8.1 Explanations covering several characteristics

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

- a) Observations on plant, leaf, inflorescence, peduncle and floral bracts should be made when the flowers in the middle third of the flowering part are open.
- b) Observations on the leaf should be made on the largest fully expanded leaf.
- c) The main colour is the colour with the largest surface area. In cases where the areas of the main and secondary colour are too similar to reliably decide which colour has the largest surface area, the darkest colour is considered to be the main colour.
- d) Observations on the bract should be made on the largest bract in the middle third of the peduncle.

8.2 Explanations for individual characteristics

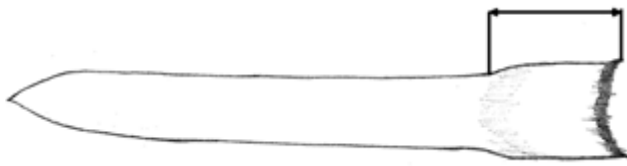
Ad 1: Plant: height



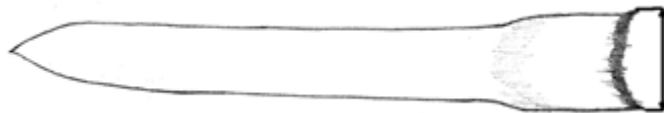
Ad 2: Plant: width



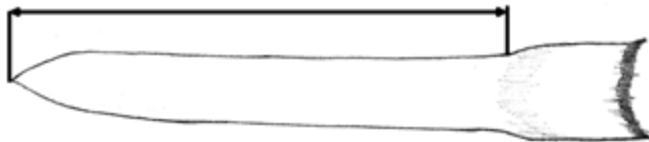
Ad 4: Leaf sheath: length



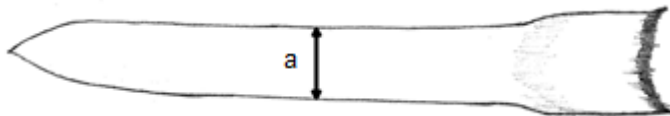
Ad 5: Leaf sheath: width



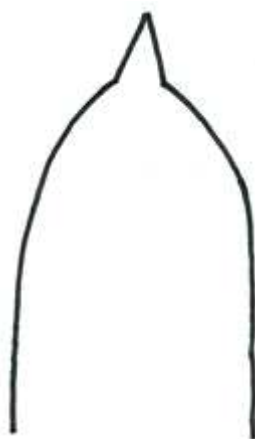
Ad 6: Leaf blade: length



Ad 7: Leaf blade: width



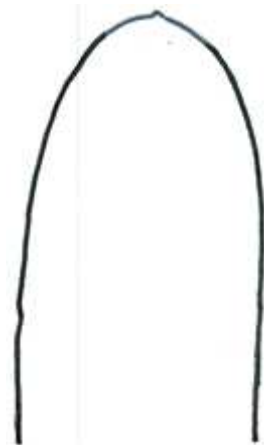
Ad 8: Leaf blade: shape of apex



1
acuminate



2
acute



3
obtuse

Ad 15: Peduncle: number of bracts

Bracts are small scale-like leaves on the peduncle.

Ad 19: Peduncle: position of first bi-coloured bract

Bi-coloured bracts are bracts with a secondary colour excluding anthocyanin.

Ad 23: Inflorescence: length



Ad 24: Inflorescence: length of flowering part

Length of flowering part should be observed from the base of the first floral bract to the top of the last flower.



Ad 25: Inflorescence: diameter of flowering part

The diameter of the flowering part should be observed at the largest diameter.



Ad 26: Inflorescence: number of floral bracts

Floral bracts are small scale-like leaves associated with a flower or flower cluster.

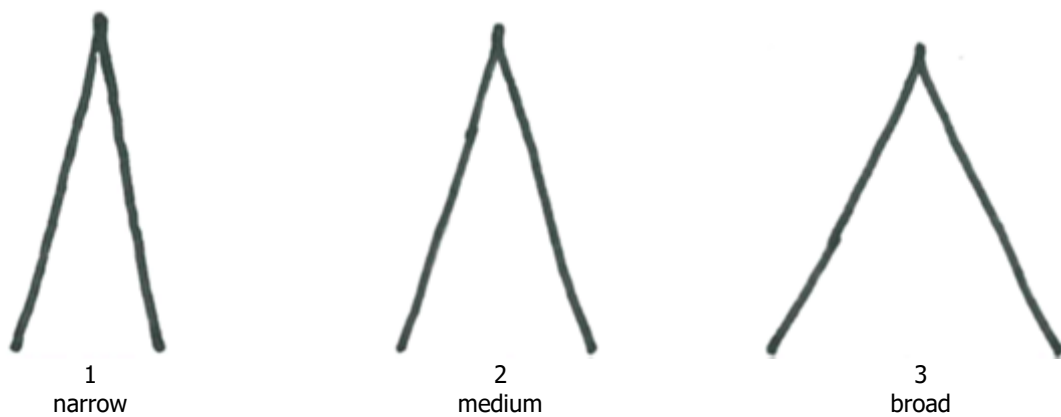
Ad 27: Floral bract: length

Observations should be made on the longest floral bract.

Ad 28: Floral bract: width

Observations should be made on the longest floral bract.

Ad 29: Floral bract: width of apex



Ad 34: Floral bract: curvature at longitudinal section



1
straight



2
slightly recurved



3
strongly recurved

Ad 35: Floral bract: number of flowers per bract



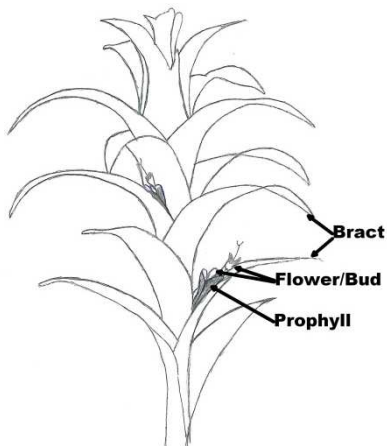
3
few



7
many

Ad 36: Prophyll: length

Prophylls are the second level bracts covering more than one flower or flower bud. Should be observed when more than one flower per bract is present.



Ad 37: Prophyll: width

See AD 36.

Ad 39: Flower: colour of the apex of the corolla



9. LITERATURE

Baensch, U., 1994: Blooming Bromeliads, Tropic Beauty Publishers, Nassau, BS, pp. 162, 174 to 176

Boonstra H., de Jong B., 1988: Teelt van Bromeliaceeën, WUR, Wageningen, NL, pp. 5, 6, 21, 47 to 53

Rauh, W., 1990: The Bromeliad Lexicon, Blandford, London, GB, 431 pp.

10. TECHNICAL QUESTIONNAIRE

The Technical Questionnaire is available on the CPVO website under the following reference:
CPVO-TQ/182/2