



TG/317/1

ORIGINAL: English

DATE: 2016-03-16

INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

Geneva

CORDYLINE

UPOV Code: CORDY

Cordyline Comm. ex Juss.
excluding *C. brasiliensis* Planch. and
C. fruticosa (L.) A. Chev.

GUIDELINES

FOR THE CONDUCT OF TESTS

FOR DISTINCTNESS, UNIFORMITY AND STABILITY

Alternative Names:^{*}

<i>Botanical name</i>	<i>English</i>	<i>French</i>	<i>German</i>	<i>Spanish</i>
<i>Cordyline</i> Comm. ex Juss., <i>Cordyline</i> Comm. ex R. Br.	Cordyline, Cabbage Tree, Torquay Palm	Cordyline	Cordyline, Keulenbaum, Keulenlilie	Cordyline

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.]

<u>TABLE OF CONTENTS</u>	<u>PAGE</u>
1. SUBJECT OF THESE TEST GUIDELINES.....	3
2. MATERIAL REQUIRED.....	3
3. METHOD OF EXAMINATION.....	3
3.1 NUMBER OF GROWING CYCLES	3
3.2 TESTING PLACE	3
3.3 CONDITIONS FOR CONDUCTING THE EXAMINATION.....	3
3.4 TEST DESIGN.....	3
3.5 ADDITIONAL TESTS.....	3
4. ASSESSMENT OF DISTINCTNESS, UNIFORMITY AND STABILITY	4
4.1 DISTINCTNESS	4
4.2 UNIFORMITY	5
4.3 STABILITY.....	5
5. GROUPING OF VARIETIES AND ORGANIZATION OF THE GROWING TRIAL.....	5
6. INTRODUCTION TO THE TABLE OF CHARACTERISTICS	6
6.1 CATEGORIES OF CHARACTERISTICS	6
6.2 STATES OF EXPRESSION AND CORRESPONDING NOTES	6
6.3 TYPES OF EXPRESSION.....	6
6.4 EXAMPLE VARIETIES.....	6
6.5 LEGEND	7
7. TABLE OF CHARACTERISTICS/TABLEAU DES CARACTÈRES/MERKMALSTABELLE/TABLA DE CARACTERES	8
8. EXPLANATIONS ON THE TABLE OF CHARACTERISTICS.....	12
8.1 EXPLANATIONS COVERING SEVERAL CHARACTERISTICS	12
8.2 EXPLANATIONS FOR INDIVIDUAL CHARACTERISTICS	12
9. LITERATURE	17
10. TECHNICAL QUESTIONNAIRE.....	18

1. Subject of these Test Guidelines

These Test Guidelines apply to all varieties of *Cordyline* Comm. ex Juss. excluding *Cordyline brasiliensis* Planch. and *Cordyline fruticosa* (L.) A. Chev..

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 plants which are capable of expressing the relevant characteristics of the variety in the first growing season.

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

8 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*

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".

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*

Each test should be designed to result in a total of at least 8 plants.

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 7 plants or parts taken from each of 7 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, a population standard of 1% and an acceptance probability of at least 95% should be applied. In the case of a sample size of 8 plants, 1 off-type is allowed.

4.3 *Stability*

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

4.3.2 Where appropriate, or in cases of doubt, stability may be 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) Plant: height/width ratio (characteristic 3)
- (b) Plant: basal shoots (characteristic 4)
- (c) Leaf blade: width (characteristic 16)
- (d) Leaf: main color (characteristic 19) with the following groups:
 - Gr. 1: white
 - Gr. 2: yellow
 - Gr. 3: green
 - Gr. 4: red
 - Gr. 5: purple
 - Gr. 6: brown
 - Gr. 7: blackish
- (e) Leaf: secondary color (characteristic 20) with the following groups:
 - Gr. 1: white
 - Gr. 2: yellow
 - Gr. 3: green
 - Gr. 4: red
 - Gr. 5: purple
 - Gr. 6: brown
 - Gr. 7: blackish

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)-(e) See Explanations on the Table of Characteristics in Chapter 8.1

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

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

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
1.	VG	Plant: height	Plante: hauteur	Pflanze: Höhe	Planta: altura	
(+)						
QN	short	basse	niedrig	baja	Tana	3
	medium	moyenne	mittel	media	Red Fountain	5
	tall	haute	hoch	alta	Jel01	7
2.	VG	Plant: width	Plante: largeur	Pflanze: Breite	Planta: anchura	
QN	narrow	étroite	schmal	estrecha	Pink Champagne	3
	medium	moyenne	mittel	media	Red Star	5
	broad	large	breit	ancha	Can Can	7
	very broad	très large	sehr breit	muy ancha	Red Fountain	9
3.	MG/ VG	Plant: height/width ratio	Plante: rapport hauteur/largeur	Pflanze: Verhältnis Höhe/Breite	Planta: relación altura/anchura	
(*) (+)						
QN	low	bas	klein	baja	Red Fountain	1
	medium	moyen	mittel	media	Tana	3
	high	élevé	groß	alta	Southern Splendour	5
4.	VG	Plant: basal shoots	Plante: pousses basales	Pflanze: Basistriebe	Planta: ramas basales	
(*) (+)						
QL	absent	absentes	fehlend	ausentes	Southern Splendour	1
	present	présentes	vorhanden	presentes	Tana	9
5.	VG	Plant: number of basal shoots	Plante: nombre de pousses basales	Pflanze: Anzahl Basistriebe	Planta: número de ramas basales	
(+)						
QN	few	peu	wenige	pocas	Green Goddess	1
	medium	moyen	mittel	medio	Tana	2
	many	beaucoup	viele	muchas	Red Fountain	3
6.	VG	Young leaf: main color	Jeune feuille: couleur principale	Junges Blatt: Hauptfarbe	Hoja joven: color principal	
(*)						
PQ	(b) RHS Colour Chart (c) (indicate reference (e) number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS- Farbkarte (Nummer angeben)	Carta de colores RHS (indíquese el número de referencia)		
7.	VG	Young leaf: secondary color	Jeune feuille: couleur secondaire	Junges Blatt: Sekundärfarbe	Hoja joven: color secundario	
PQ	(b) RHS Colour Chart (c) (indicate reference (e) number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS- Farbkarte (Nummer angeben)	Carta de colores RHS (indíquese el número de referencia)		
8.	VG	Young leaf: tertiary color	Jeune feuille: couleur tertiaire	Junges Blatt: Tertiärfarbe	Hoja joven: color terciario	
PQ	(b) RHS Colour Chart (c) (indicate reference (e) number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS- Farbkarte (Nummer angeben)	Carta de colores RHS (indíquese el número de referencia)		

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
9. (*)	VG	Petiole: main color of upper side	Pétiole: couleur principale de la face supérieure	Blattstiel: Hauptfarbe der Oberseite	Pecíolo: color principal del haz	
PQ (e)	RHS Colour 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)		
10. (*) (+)	VG/MS	Petiole: length	Pétiole: longueur	Blattstiel: Länge	Pecíolo: longitud	
QN (a)	very short	très court	sehr kurz	muy corto	Cardinal	1
	short	court	kurz	corto	Tana	3
	medium	moyen	mittel	medio	Jel01	5
	long	long	lang	largo	Purple Sensation	7
	very long	très long	sehr lang	muy largo	Red Fountain	9
11. (+)	VG/MG	Petiole: width at narrowest part	Pétiole: largeur à la partie la plus étroite	Blattstiel: Breite am schmalsten Teil	Pecíolo: anchura en el parte más estrecho	
QN (a)	narrow	étroit	schmal	estrecho	Red Fountain	1
	medium	moyen	mittel	medio	Cardinal	2
	broad	large	breit	ancho	Red Star	3
12. (*) (+)	VG	Petiole: profile in cross section	Pétiole: profil en section transversale	Blattstiel: Profil im Querschnitt	Pecíolo: perfil en sección transversal	
QN (a)	flat or slightly concave	plat ou légèrement concave	flach oder leicht konkav	plano o ligeramente cóncavo	Cardinal	1
	moderately concave	modérément concave	mäßig konkav	moderadamente cóncavo	Purple Sensation	2
	strongly concave	fortement concave	stark konkav	muy cóncavo	Red Fountain	3
13. (*) (+)	VG	Leaf: curvature	Feuille : courbure	Blatt: Biegung	Hoja: curvatura	
QN (d)	absent or very weak	nulle ou très faible	fehlend oder sehr gering	ausente o muy débil	Pink Champagne	1
	weak	faible	gering	débil	Green Goddess	3
	medium	moyenne	mittel	media	Albertii	5
	strong	forte	stark	fuerte	Can Can	7
14. (+)	VG	Leaf: attitude of basal third	Feuille: port du tiers basal	Blatt: Haltung des basalen Drittels	Hoja: porte del tercio basal	
QN (d)	upwards	dressé	aufrecht	hacia arriba	Pink Champagne	1
	upwards and outwards	dressé et perpendiculaire	aufrecht und waagerecht	hacia arriba y hacia afuera	Albertii	2
	outwards	perpendiculaire	waagerecht	hacia afuera	Red Fountain	3

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
15.	MG/ VG (*) (+)	Leaf blade: length	Limbe: longueur	Blattspreite: Länge	Limbo: longitud	
QN	(d)	very short	très court	sehr kurz	muy corto	Karo Kiri 1
		short	court	kurz	corto	Pink Champagne 3
		medium	moyen	mittel	medio	Tana 5
		long	long	lang	largo	Purple Sensation 7
		very long	très long	sehr lang	muy largo	Red Fountain 9
16.	VG/ MS (*)	Leaf blade: width	Limbe: largeur	Blattspreite: Breite	Limbo: anchura	
QN	(d)	narrow	étroit	schmal	estrecha	Pink Champagne 1
		medium	moyen	mittel	media	Purple Sensation 3
		broad	large	breit	ancha	Green Goddess 5
17.	VG (+)	Leaf: venation	Feuille: nervation	Blatt: Aderung	Hoja: nervadura	
QL	(d)	parallel	parallèle	parallel	paralela	Albertii, Red Fountain 1
		pinnate	pennée	gefiedert	pinnada	Tana 2
18.	VG	Leaf: glossiness	Feuille: brillance	Blatt: Glanz	Hoja: brillo	
QN	(c)	absent or weak	absente ou faible	fehlend oder gering	ausente o débil	Green Goddess 1
	(d)	medium	moyenne	mittel	medio	Albertii 2
		strong	forte	stark	fuerte	Red Fountain, Tana 3
19.	VG (*)	Leaf: main color	Feuille: couleur principale	Blatt: Hauptfarbe	Hoja: color principal	
PQ	(c) (d) (e)	RHS Colour 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)	
20.	VG (*)	Leaf: secondary color	Feuille: couleur secondaire	Blatt: Sekundärfarbe	Hoja: color secundario	
PQ	(c) (d) (e)	RHS Colour 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)	
21.	VG	Leaf: distribution of secondary color	Feuille: répartition de la couleur secondaire	Blatt: Verteilung der Sekundärfarbe	Hoja: distribución del color secundario	
PQ	(c)	mostly middle part	principalement sur la partie médiane	überwiegend im mittleren Teil	mayormente en la parte central	Purple Sensation 1
	(d)	margin and middle part	sur le bord et sur la partie médiane	am Rand und im mittlerer Teil	parte marginal y central	Pink Champagne, Red Star 2
	(e)	mostly margin	principalement sur le bord	überwiegend am Rand	mayormente en el margen	Southern Splendour 3

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
22.	VG	Leaf: tertiary color	Feuille: couleur tertiaire	Blatt: Tertiärfarbe	Hoja: color terciario	
PQ	(c) (d) (e)	RHS Colour 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)	
23.	VG	Leaf: main color of lower side	Feuille: couleur principale de la face inférieure	Blatt: Hauptfarbe der Unterseite	Hoja: color principal del envés	
PQ	(d) (e)	RHS Colour 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)	

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 petiole should be made on the mature leaf in the middle third of the foliage on a stem.
- (b) Observations on the young leaf should be made on the apex of the stem.
- (c) Observations on color and glossiness of the leaf should be made on the upper side.
- (d) Observations on the leaf and leaf blade should be made on mature leaves on the lower part of the foliage on the stem.
- (e) The main color is the color with largest surface area. The secondary color is the color with the second largest surface area and the color with the third largest surface is the tertiary color. In cases where the area of the main and secondary color are too similar to reliably decide which color has the largest surface area on the blade, the darker color is considered to be the main color.

8.2 *Explanations for individual characteristics*

Ad. 1: Plant: height

Plant height is observed towards the end of the growing cycle.

Ad. 3: Plant: height/width ratio



1
low



3
medium



5
high

Ad. 4: Plant: basal shoots

Ad. 5: Plant: number of basal shoots

Observations should be made towards the end of the growing cycle.



1
absent

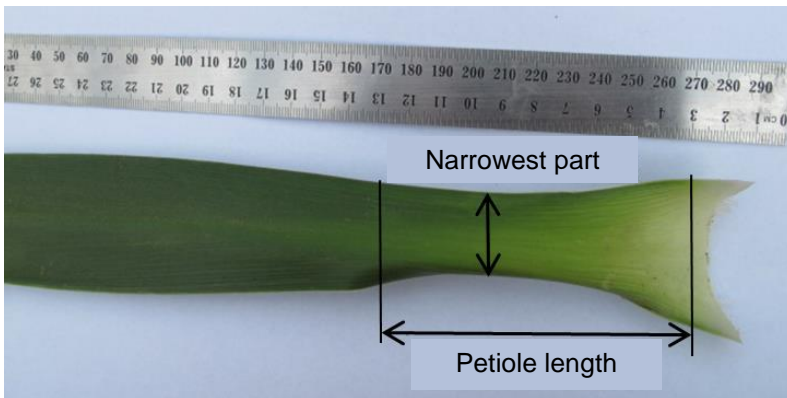


9
present

Ad. 10: Petiole: length

Ad. 11: Petiole: width at narrowest part

The petiole begins at the point of attachment to the stem and ends at the beginning of the blade, the point where the leaf width begins to increase.



Ad. 12: Petiole: profile in cross section

Observations should be made in the middle third of the petiole.



1
flat or slightly concave



2
moderately concave



3
strongly concave

Ad. 13: Leaf: curvature



1
absent or very weak



3
weak

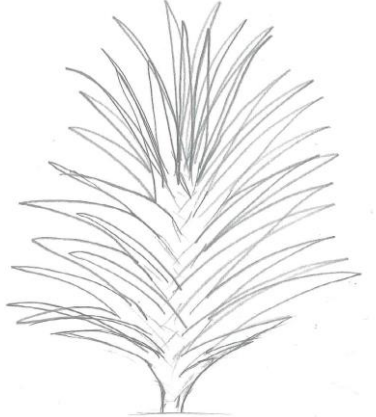


5
medium



7
strong

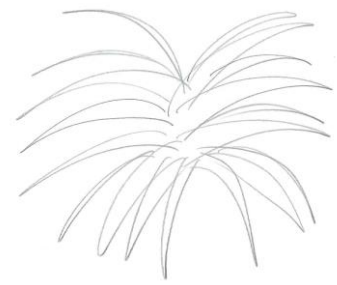
Ad. 14: Leaf: attitude of basal third



1
upwards



2
upwards and outwards



3
outwards

Ad. 15: Leaf blade: length



The blade length is determined from the apex to the petiole. The blade base and the start of the petiole can be identified by the change in width and profile in cross section of the leaf.

Ad. 17: Leaf: venation



1
parallel



2
pinnate

9. Literature

Harris, W., 2001: Horticultural and conservation significance of the genetic variation of cabbage trees (*Cordyline* spp.). In: Oates MR (ed.). *New Zealand plants and their story. Proceedings of a Conference held in Wellington 1-3 October 1999.* Lincoln, Royal New Zealand Institute of Horticulture, NZ. 87-91 pp.

Metcalf, L. J., 1975: *The Cultivation of New Zealand trees and shrubs*, AH & AW Reed Ltd. Auckland, NZ

Poole, A. L. and Adams, N. M., 1986: *Trees and Shrubs of New Zealand*; Government Printing Office Publishing. Wellington, NZ. 38-42 pp.

Simpson, P., 2000 : *Dancing Leaves: The story of the New Zealand cabbage tree*, Canterbury University Press, Christchurch, NZ

10. Technical Questionnaire

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

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

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

1. Subject of the Technical Questionnaire

1.1 Genus

1.1.1 Botanical name

1.1.2 Common name

1.2 Species (please specify)

1.2.1 Botanical name

1.2.2 Common name

2. Applicant

Name

Address

Telephone No.

Fax No.

E-mail address

Breeder (if different from applicant)

3. Proposed denomination and breeder's reference

Proposed denomination (if available)

Breeder's reference

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

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

4.1 Breeding scheme

Variety resulting from:

4.1.1 Crossing

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

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

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

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

(c) unknown cross []

4.1.2 Mutation []
(please state parent variety)

.....

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

.....

4.1.4 Other []
(please provide details)

.....

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

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

4.2 Method of propagating the variety

4.2.1 Vegetative propagation

- (a) cuttings
- (b) *in vitro* propagation
- (c) division
- (d) Other (state method)

- 4.2.2 Other
(please provide details)

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

5. Characteristics of the variety to be indicated (the number in brackets refers to the corresponding characteristic in Test Guidelines; please mark the note which best corresponds).

Characteristics	Example Varieties	Note
5.1 Plant: height/width ratio (3)		
low	Red Fountain	1[]
low to medium		2[]
medium	Tana	3[]
medium to high		4[]
high	Southern Splendour	5[]
5.2 Plant: basal shoots (4)		
absent	Southern Splendour	1[]
present	Tana	9[]
5.3 Leaf blade: width (16)		
narrow	Pink Champagne	1[]
narrow to medium		2[]
medium	Purple Sensation	3[]
medium to broad		4[]
broad	Green Goddess	5[]
5.4 (i) Leaf: main color (19)		
RHS Colour Chart (indicate reference number)		
5.4 (ii) Leaf: main color (19)		
white		1[]
yellow		2[]
green		3[]
red		4[]
purple		5[]
brown		6[]
blackish		7[]

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

Characteristics	Example Varieties	Note
5.5 (i) Leaf: secondary color (20) RHS Colour Chart (indicate reference number)		
5.5 (ii) Leaf: secondary color (20) white		1[]
yellow		2[]
green		3[]
red		4[]
purple		5[]
brown		6[]
blackish		7[]

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

6. Similar varieties and differences from these varieties

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

Denomination(s) of variety(ies) similar to your candidate variety	Characteristic(s) in which your candidate variety differs from the similar variety(ies)	Describe the expression of the characteristic(s) for the similar variety(ies)	Describe the expression of the characteristic(s) for your candidate variety
<i>Example</i>	<i>Leaf blade: width</i>	<i>narrow</i>	<i>medium</i>

Comments:

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

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

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

Yes [] No []

(If yes, please provide details)

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

Yes [] No []

(If yes, please provide details)

7.3 Other information

Main use of the variety

(a) container plant	[...]
(b) garden plant	[...]
(c) other (please provide details)	[...]

7.4 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.]

8. Authorization for release

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

Yes [] No []

(b) Has such authorization been obtained?

Yes [] No []

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

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

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

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

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

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

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

Please provide details for where you have indicated "yes".

.....

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

Applicant's name	<input type="text"/>		
Signature	<input type="text"/>	Date	<input type="text"/>

[End of document]