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GENEVA

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FOR
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WORKING PAPER ON TEST GUIDELINES FOR EUCALYPTUS (*Eucalyptus gunnii*)

Document prepared by experts from France

I. Subject of these Guidelines

This Test Guidelines apply to all vegetatively propagated varieties of *Eucalyptus gunnii* of the family Myrtaceae.

II. Material Required

1. The competent authorities decide when, where and in what quantity and quality the plant material required for testing the variety is to be delivered. Applicants submitting material from a State other than that in which the testing takes place must make sure that all customs formalities are complied with. As a minimum, the following quantity of plant material is recommended :

10 young plants (six months old at least)

2. The plant material supplied should be visibly healthy, not lacking in vigour or affected by any important pest or disease.

3. The plant material must not have undergone any treatment unless the competent authorities allow or request such treatment. If it has been treated, full details of the treatment must be given.

4. If the applicant submits distinguishing characteristics which can only be observed on adult trees, he should be able to indicate to the authorities at least an implantation of trees of the variety on which these characteristics can be observed.

III. Conduct of Tests

1. A test should normally be conducted for three growing period after the year of establishment. If distinctness and/or uniformity cannot be sufficiently established in these three growing periods, the test should be extended for a more growing period.

2. The tests should normally be conducted at one place. If any important characteristics of the variety cannot be seen at that place, the variety may be tested at an additional place.

3. The tests should be carried out under conditions ensuring normal growth. The size of the plots should be such that plants or parts of plants may be removed for measurement and counting without prejudice to the observations which must be made up to the end of the growing period. As a minimum, each test should include a total of 10 plants. Separate plots for observation and for measuring can only be used if they have been subject to similar environmental conditions.

4. Additional tests for special purposes may be established.

IV. Methods and Observations

1. Unless otherwise indicated all observations and measurements, weighing or counting should be made on 10 plants or parts of plants taken from 10 plants.

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 10 plants, the maximum number of off types allowed would be 1.

3. Observations on bark should be made, only after peeling. Observations on main stem should be made in summer, once it is well developed. Observations on rhytidome should be made, on dead bark once peeling is significant. Observations on leaves should be made on leaves, on terminal shoots in vegetative growth.

4. 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 DE 6500 and should fall within the tolerance set out in British Standard 950, Part I. These determinations should be made with the plant part placed against a white background.

V. Grouping of Varieties

1. The collection of varieties to be grown should be divided into groups to facilitate the assessment of distinctness. Characteristics which are suitable for grouping purposes are those which are known from experience not to vary, or to vary only slightly, within a variety. Their various states of expression should be fairly evenly distributed throughout the collection.

2. It is recommended that the competent authorities use the following characteristics for grouping varieties :

- (a) Plant : shape (characteristic 2)
- (b) Main stem : colour of non-dead bark at the base before peeling (characteristic 6)
- (c) Main stem : glaucescence (characteristic 8)
- (d) Bark : anthocyanin (characteristic 13)

VI. Characteristics and Symbols

1. To assess distinctness, uniformity and stability, the characteristics and their states as given in the Table of Characteristics should be used.

2. Notes (numbers), for the purposes of electronic data processing, are given opposite the states of expression for each characteristic.

3. Legend:

(*) Characteristics that should be used on all varieties in every growing period over which examinations are made and always be included in the variety descriptions, except when the state of expression of a preceding characteristic or regional environmental conditions render this impossible.

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

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

English	Français	Deutsch	Español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note / Nota
1	Plant : growth (height à 4 years)	Plante: croissance (hauteur à 4 ans)	Planta : crecimiento (altura a los 4 anos)		
	slow	lente	lento		3
	medium	moyenne	medio		5
	fast	rapide	rapido	Cagire	7
2+*	Plant : shape (=outline at 3 years)	Plante :forme (= silhouette à 3 ans)	Planta: forma (silueta a los 3 anos)		
	conic	conique	conico		1
	pyramidal	pyramidale	piramidale	Cagire	2
	fusiforme	fusiforme	fusiforme	Vallier	3
	ovate	ovale	ovale		4
3(*)	Leaves : density	Feuilles : densité	Hojas : densidad		
	low	faible	baja	Vallier	3
	medium	moyenne	media		5
	high	forte	alta	Cagire	7
4(*)	Main stem : straightness	Tige principale : rectitude	Tronco principal : rectitud		
	straight or upright	droite	recto	Cagire	1
	sinuous	sinueuse	sinuoso		2
5	Main stem : straightness of the apex when flushing	Tige principale : rectitude de l'apex en croissance	Tronco principal : rectitud de apice en crecimiento		
	straight or upright	droit	recto	Cagire	1
	sinuous	sinueux	sinuoso		2

English	Français	Deutsch	Español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note / Nota
6(*) Main stem : color of non-dead bark at the base before peeling (at one year)	Tige principale : couleur de l'écorce non morte de la base avant desquamation (à 1 an)		Tronco principal : color de la corteza no muerta de la base antes de la descamacion (a un ano)		
grey	gris		Gris		1
green	vert		Verde	Cagire	2
brown	marron		Marron		3
7(*) Main stem : colour of the non-dead bark of the upper part before peeling (at one year)	Tige principale: couleur de l'écorce non morte de la partie supérieure avant desquamation (à 1 an)		Tronco principal : color de la corteza no muerta de la parte superior antes de la descamacion (a un ano)		
green	vert		verde		1
green and red	vert et rouge		verde y rojo	Cagire	2
8(*) Main stem : glaucescence (on tree from 1 to 3 years)	Tige principale : glaucescence (sur arbre de 1 à 3 ans)		Tronco principal : glaucescencia (sobre arbol de 1 a 3 anos)		
absent	absente		ausente		1
present	présente		presente	Vallier	9
9 Main stem : intensity of glaucescence (tree from 1 to 3 years)	Tige principale : intensité de la glaucescence (arbre de 1 à 3 ans)		Tronco principal : intensidad de glaucescencia (sobre arbol de 1 a 3 anos)		
weak	faible		debil	Cagire	3
medium	moyenne		media		5
strong	forte		fuerte	Vallier	7

English	Français	Deutsch	Español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note / Nota
10(*) Main stem : colour of the base of the non-dead bark (as from 3 years)	Tige principale : couleur de la base de l'écorce non morte(à partir de 3 ans)		Tronco principal : color de la base de la corteza no muerta (a partir de los 3 anos)		
grey brown	gris marron		gris marron	Cagire	1
green	vert		verde		2
reddish green	vert rougeâtre		verde rojizo		3
11(*) Main stem : colour of the upper part of the non-dead bark (as from 3 years)	Tige principale : couleur de la partie supérieure de l'écorce non morte (à partir de 3 ans)		Tronco principal : color de la parte superior de la corteza no muerta (a partir de los 3 anos)		
green	vert		verde		1
green and red	vert et rouge		verde y rojo	Cagire	2
12 Age of the tree on disappearance of glaucescence from the main stem	Age de l'arbre à la disparition de la glaucescence de la tige principale		Edad del arbol en la desaparicion de glaucescencia del tronco principal		
early	précoce		precoz		3
medium	moyenne		mediana		5
late	tardif		tardia		7
13(*) Bark : anthocyanin	Ecorce : anthocyane		Corteza : antocianina		
absent	absente			Cagire	1
present	présente	Vorhanden	Présente		9
14 Bark : intensity of anthocyanin	Ecorce : intensité de l'anthocyane		Corteza : intensidad de antocianina		
weak	faible		baja		3
medium	moyenne		media		5
strong	forte		alta		7

English	Français	Deutsch	Español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note / Nota
15 Rhytidome (dead bark) : appearance of the surface (tuberous cells) on tree between 1 and 5 years	Rhytidome (écorce morte) : aspect de la surface (cellules tubéreuses) sur des arbres entre 1 et 5 ans		Rhytidome (corteza muerta) : aspecto de la superficie (células tuberosas) - sobre arboles entre 1 y 5 anos		
smooth	lisse			Cagire	1
rough	rugueux				2
16(*) Primary branches : density of branching between 2 and 5 years (number of branches per linear meter) before natural pruning before 4 to 5 years	Rameaux primaires : densité de la branchaison entre deux et cinq ans (nombre de branches par mètre linéaire) avant élaguage naturel avant 4 à 5 ans)		Primeras ramas : densidade de la ramificacion entre 2 y 5 anos (numero de ramas por metro linear) antes de la poda natural (antes de los 4 a 5 anos)		
very low	très faible		muy baja		1
low	faible		baja		3
medium	moyenne		media		5
high	forte		alta	Cagire	7
very high	très forte		muy alta		9
17(+) Primary branches : angle in degrees of the insertion compared to main stem (on year or one year old branch on 2 to 3 year's old tree)	Rameaux primaires : angle en degré de l'insertion par rapport à la tige principale (rameau de l'année ou d'un an sur arbre de deux à trois ans, angle formé entre la tige principale et ce rameau)		Primeras ramas : angulo en grados (ramas del ano o de un ano sobre arbol de 2 à 3 anos, angulo formado entre el tronco principal y la rama)		
20°	20°		20°	Vallier	1
45°	45°		45°	Cagire	2
90°	90°		90°		3

English	Français	Deutsch	Español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note / Nota
18(*) Primary branch : curve of the terminal part	Rameau primaire : courbure de la partie terminale		Primera rama : curvatura de la parte terminal		
semi plagiotropic pendulous	semi plagiotrope pendulaire		semi plagiotropo pendular		1 2
19(*) Primary branch : colour	Rameau Primaire : couleur		Primera rama : color		
green	vert		verde		1
green and sometimes brown/red	vert et parfois brun rouge		verde y algunas veces castano- rojo	Cagire	2
20 Stem : shape of the primary branch insertion excrescence on the main stem	Tige : forme du bourrelet d'insertion du rameau primaire sur la tige principale		Tronco : forma de la insercion de la primera rama sobre el tronco principal		
inverted V spherical	en V renversé sphérique		en V invertida esferica	Cagire	1 2
21 Leaf : early appearance of the adult form (petiolate and lanceolate)	Feuille : précocité d'apparition de la forme adulte (pétiolée et lancéolée)		Hoja : precocidad de la aparicion de la forma adulta (peciolada y lanceolada)		
early	précoce				3
medium (3 to 5 years)	moyenne (3 à 5 ans)			Cagire	5
late	tardive				7
22(*) Leaf : glaucescence (on 6 month seedling at most)	Feuille : glaucescence (sur plant de 6 mois maximum)		Hojas : glaucescen-cia (sobre plantas de 6 meses maximo)		
absent or very weak	absente ou très faible		ausente o muy débil		1
weak	faible		débil	Cagire	3
medium	moyenne		mediana		5
strong	forte		fuerte	Vallier	7
very strong	très forte		muy fuerte		9

English	Français	Deutsch	Español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note / Nota
23(*) Leaf : glaucescence (on 2 year seedling at least)	Feuille : glaucescence (sur plant de deux ans au moins)		Hoja : glaucescencia (sobre plantas de 2 anos o mas)		
absent or very weak	absente ou très faible		ausente o muy débil	Cagire	1
weak	faible		débil		3
medium	moyenne		mediana		5
strong	forte		fuerte	Vallier	7
very strong	très forte		muy fuerte		9
24(*) Petiolate and lanceolate adult leaf : length without petiole (on 2 year seedling at least)	Feuille adulte pétiolée et lancéolée : longueur hors pétiole (sur plant de deux ans minimum)		Hoja adulta peciollada y lanceolada : (sobre plantas de 2 anos minimo)		
short	courte		corta		3
medium	moyenne	Mittel	medio		5
long	longue		larga		7
25(*) Petiolade and lanceolate adult leaf : width (on 2 year seedling at least)	Feuille adulte, pétiolée et lancéolée: largeur (sur plant de deux ans minimum)		Hoja adulta pecio- lada y lanceolada : anchura (sobre plantas de 2 anos minimo)		
narrow	étroite		angosta		3
medium	moyenne		medio		5
broad	large		ancha		7
26 Flower bud : length	Bouton floral : longueur		Yema floral : longitud		
short	courte		corta		3
medium	moyenne		media		5
long	longue		larga		7

English	Français	Deutsch	Español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note / Nota
27 Flower vessel : glaucescence	Réceptacle floral : glaucescence		Receptaculo floral : glaucescencia		
very weak	très faible		muy débil		1
weak	faible		débil		3
medium	moyenne		medio		5
strong	forte		fuerte		7
very strong	très forte		muy fuerte		9
28(+) Operculum : mucro	Opercule : mucron		Opérculo : mucron		
absent	absent		ausente		1
present	présent		presente		9
29 Operculum : color	Opercule :Couleur		Opérculo : color		
yellow	jaune		amarillo		1
green	vert		verde		2
30 Flower vessel : glaucescence	Réceptacle floral : glaucescence		Receptaculo floral : glaucescencia		
nil to very weak	nulle à très faible		nulo o muy débil		1
weak	faible		débil		3
medium	moyen		medio		5
strong	forte		fuerte		7
very strong	très forte		muy fuerte		9
31+ Fruit : shape (*)	Fruit : Forme		Fruto : forma		
ovoid	ovoïde		ovoïde		1
ueceolate	urne		urceolado		2
triangular	triangulaire		triangular		3
32 Age of tree at first flowering	Age de l'arbre à la première floraison		Edad del arbol en la prima floracion		
young	peu âgé		joven		3
medium	moyen		demiana		5
old (more than 7-8 years)	âgé (supérieur à 7-8 ans)		vieja (superior a 7-8 anos)	Cagire, Vallier	7

VIII. Explanations on the Table of characteristics

Add.2 : Plant shape

1
conic

2
pyramidal

3
fusiform

4
ovate

Add. 4 : Primary branches : insertion angle in degrees (current year branch or one year branch on tree of two to three years measured between the main stem and the branch)

Add. 28 : Operculum: mucro

1
absent

9
present

Add.31 : Fruit : shape

1
Ovoïde

2
Urcéolé

3
Triangulaire

IX. Literature

X. Technical Questionnaire

	Reference Number (not to be filled in by the applicant)
<p>TECHNICAL QUESTIONNAIRE to be completed in connection with an application for plant breeders' rights</p>	
1. Species	<p><i>Eucalyptus gunnii</i> EUCALYPTUS</p>
2. Applicant (Name and address)	
3. Proposed denomination or breeder's reference	

4. Information on origin, maintenance and reproduction of the variety

4.1 Origin

(a) Seedling (indicate parent varieties)

..... []

(b) Mutation (indicate parent variety)

..... []

(c) Discovery (indicate where and when)

..... []

(d) Other (specify)

..... []

4.2 Method of reproduction

- cuttings []

- *in vitro* propagation []

- other (state method) []

4.3 Other information

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

Characteristics	Example Varieties	Note
5.1		1[] 9[]
5.2		1[] 9[]
5.3		1[] 2[]
5.4		3[] 5[] 7[]
5.5		
5.6		1[] 2[] 3[] 4[] 5[] 6[] 7[] 8[]

Characteristics	Example Varieties	Note
5.7		1[] 2[] 3[] 4[] 5[] 6[] 7[] 8[]
5.8		1[] 9[]

6. Similar varieties and differences from these varieties

Denomination of similar variety	Characteristic in which the similar variety is different ^{o)}	State of expression of similar variety	State of expression of candidate variety
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^{o)} In the case of identical states of expressions of both varieties, please indicate the size of the difference.

7. Additional information which may help to distinguish the variety

7.1 Resistance to pest and diseases

7.2 Special conditions for the examination of the variety

7.3 Other information

A representative color photo of the variety should be added to the Technical Questionnaire.

8. Authorization for release

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

Yes [] No []

(b) Has such authorization been obtained?

Yes [] No []

If the answer to that question is yes, please attach a copy of such an authorization.

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