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GENEVA

**TECHNICAL WORKING PARTY
FOR
ORNAMENTAL PLANTS AND FOREST TREES**

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WORKING PAPER ON TEST GUIDELINES FOR THYME
(Thymus vulgaris L.)

Document prepared by experts from France

I. Subject of these Guidelines

These Test Guidelines apply to all vegetatively propagated varieties of *Thymus vulgaris* L. of the family Labiatae (Lamiaceae).

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 material is recommended:

20 rooted cuttings.

2. The plant material supplied should be visibly healthy, not lacking in vigor or affected by any important pests or diseases.

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.

III. Conduct of Tests

1. A test should normally be conducted for one growing period (if necessary, after the year of establishment in open field). If distinctness and/or uniformity cannot be sufficiently established in one growing period, the test should be extended for a second growing period.

2. The test 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 test should be carried out in the glasshouse, in pots with well aired substrate with good water drainage under the following growing conditions.

3. The size of the tests 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. Each test should include a total of 20 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 purposed may be established.

IV. Methods and Observations

1. All observations determined by measurement or counting should be made on 10 plants or parts taken from each of 10 plants.

2. For the assessment of uniformity a population standard of 1% with an acceptance probability of at least 95% should be applied. In the case of a sample size of 20 plants, the maximum number of off-types allowed would be 1.

3. Unless otherwise indicated, all observations should be made on typical organs of 10 plants just before the time of full flowering.

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) Leaf: variegation (characteristic 16)
- (b) Leaf: main colour (characteristic 17)
- (c) Flower: colour of petal (characteristic 19)
- (d) Plant: male sterility (characteristic 26)

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 : height (*)	Plante: hauteur				
short	basse			Savoie	3
medium	moyenne			Passet, Heili	5
tall	haute			Valdeyron	7
very tall	très haute			Gambaru, Ygor	9
2. Plant: growth habit at flowering (*)	Plante : port à la floraison				
erect	dressé			Gambaru, Valdeyron	1
semi erect	demi dressé			Allemand	3
prostrate	horizontal			Heili, Savoie	5
3. Plant: size (*)	Plante : taille				
small	faible			5.77	3
medium	moyen			Escalin, Ygor, Pegase	5
large	fort			Gambaru	7
4. Plant: density of foliage (*)	Plante: densité du feuillage :				
Sparse	faible			1.52	3
Medium	moyenne			Passet, Allemand	5
Dense	forte			Ygor, Pegase	7
5. Plant: distribution of leaves along stem (*)	Plante : répartition des feuilles le long de la tige				
only at base	seulement à la base			Escalin, Passet	1
only at middle	seulement au milieu			2.40	2
only upper part	seulement au sommet			Ygor, Pegase	3
along whole stem	tout le long de la tige			Gambaru, Valdeyron, Heili	4
6. Stem: length (*)	Tige : longueur				
short	courte			Pegase, Savoie	3
medium	moyenne			Ygor, Heili	5
long	longue			Gambaru, Passet	7
7. Stem: thickness	Tige : épaisseur				
thin	mince			Gambaru, Heili	3
medium	moyenne			Pegase	5
thick	épaisse			Passet	7

English	Français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
8. Stem: distribution of flowers on stem (*)	Fleur : répartition des inflorescences sur la tige				
concentrated at tip	très terminale			1.44, 3.49	1
along upper quarter	terminale			Escalin, Allemand	2
along upper half	le long de la moitié supérieure			1.52, Heili	3
along upper two thirds	le long des 2/3 supérieurs			Gambaru	4
along whole stem	tout le long de la tige			Passet	5
9. Stem : density of flowers	Tige : densité des fleurs				
sparse	faible			Gambaru, Ygor	3
medium	moyenne			Valdeyron, Allemand, Escalin	5
dense	forte				7
10. Stem : length of flowering part	Tige : longueur de la zone florifère				
short	courte			Valdeyron, Allemand, Escalin	3
medium	moyenne			Gambaru, Ygor, Pegase	5
long	longue			Passet	7
11. Leaf : general shape (*)	Feuille : forme générale				
elliptic	Elliptique			2.40	1
ovate	Ovale			Savoie, Ygor	2
triangular	Triangulaire			Gambaru, Allemand	3
12. Leaf: length (*)	Feuille : longueur				
short	Petite			7.56	3
medium	Moyenne			Pegase, Passet, Heili	5
long	Grande			Allemand, Savoie	7
13. Leaf: width (*)	Feuille : largeur de la base du limbe				
narrow	Petite			5.46.1	3
medium	Moyenne			3.49	5
broad	Grande			Passet, Savoie	7
14. Leaf: ratio length/width	Feuille: rapport longueur/largeur				
low	Petit				3
medium	Moyen				5
high	Grand				7

English	Français	deutsch	español	Example Varieties Exemples Beispielsorten Variedades ejemplo	Note/ Nota
15. Leaf: prominence of veins	Feuille : proéminence des nervures				
weak	Faible			Valdeyron, Escalin, Ygor	3
medium	Moyen			Heili, Allemand	5
strong	Fort			4.77, 3.07, Savoie	7
16. Leaf: variegation (+)	Feuille : panachure				
absent	Absente			Valdeyron	1
present	Presente			Silver Pösie	9
17. Leaf: main color (*)	Feuille : couleur principale				
yellow green	Jaune vert				1
green	Vert			Escalin, Allemand	2
blue green	vert bleu			Passet, Ygor	3
grey green	gris bleu			Valdeyron, Pegase, Gambaru	4
18. Leaf: intensity of main colour (*)	Feuille : intensité de la couleur principale				
light	Faible				3
medium	Moyenne				5
dark	Forte				7
19. Flower: size (*)	Fleur : taille				
small	Petite			Passet, Luberon	3
medium	Moyenne			Gambaru, Allemand	5
large	Grande			Ygor, Heili	7
20. Flower: color of petal (*)	Fleur : couleur du pétale				
white or slightly pink	blanche ou légèrement rose			Passet	1
medium pink	Rose			Escalin, Ygor	2
purple	Pourpre			4.77	3
violet	Mauve			Valdeyron, Pegase	4
21. Flower: intensity of color of petal (*)	Fleur : intensité de la couleur du pétale				
light	Claire				3
medium	Moyenne				5
dark	foncée				7
22. Flower: length of style (*)	Fleur : longueur du style				
very short	très courte			Valdeyron	1
short	courte				3
medium	moyenne			3.07	5
long	forte			Gambaru, Escalin	7

English	Français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
23. Flower: colour of style (*)	Fleur : couleur du style				
white	blanche				1
pink	rose			Ygor	2
purple	violacée				3
mauve	mauve			Escalin, Gambaru, Luberon	4
24. Flower: intensity of color of style (*)	Fleur : intensité de la couleur du style				
light	faible				3
medium	moyenne	mittel	medio		5
dark	forte				7
25. Flower: position of the more intense colored zone of style	Fleur : position de la zone colorée sur le style				
only at tip	seulement terminale			Escalin, Valdeyron	1
only at upper half	seulement sur la moitié supérieure			Passet, Gambaru, Heili, Allemand	2
along all style	tout le long du style			Ygor	3
26. Time of flowering (*)	Précocité de floraison				
very early	très précoce			Ygor, 3.49	1
early	précoce			Valdeyron, Allemand	3
medium	moyenne			Pegase, Luberon	5
late	tardive			Passet, Gambaru	7
very late	très tardive			Savoie	9
27. Plant: male sterility (*)	Plante : sexe				
absent	absent				1
present	présent				9

VIII. Explanations on the Table of Characteristics

Ad. 16: Leaf: variegation

1
absent

2
present

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>Thymus vulgaris</i> L. THYME</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 Test Guidelines; please mark the state of expression which best corresponds).			
Characteristics	Example Varieties	Note	
5.1 Plant: growth habit at flowering (2)			
erect	Gambaru, Valdeyron, Passet, Ygor, Pegase	1[]	
semi erect	Allemand	3[]	
prostrate	Heili, Savoie, 2.40	5[]	
5.2 Plant: distribution of leaves along stem (5)			
only at base	Escalin, Passet	1[]	
only at middle	2.40	2[]	
only upper part	Ygor, Pegase	3[]	
all along stem (from base to tip)	Gambaru, Valdeyron, Heili, Allemand	4[]	
5.3 Stem: distribution of flowers on stem (8)			
concentrated at tip	1.44, 3.49	1[]	
only terminal	Escalin, Allemand	2[]	
along upper half	1.52, Heili	3[]	
along upper the two superior thirds	Gambaru	4[]	
along whole stem	Passet	5[]	
5.4 Leaf: variegation (16)			
absent	Valdeyron	1[]	
present	Silver Posie	9[]	
5.5 Leaf: main color (17)			
yellow green		1[]	
green	Escalin, Allemand	2[]	
blue green	Passet, Ygor	3[]	
grey green	Valdeyron, Pegase, Gambaru	4[]	

Characteristics	Example Varieties	Note
5.6 Leaf : intensity of main color (18)		
light		3[]
medium		5[]
dark		7[]
5.7 Flower: color of petal (20)		
white or slightly pink	Passet	1[]
medium pink	Escalin, Ygor	2[]
purple	4.77	3[]
violet	Valdeyron, Pegase, Luberon	4[]
5.8 Plant: male sterility (27)		
absent	Ygor, Heili	1[]
present	Valdeyron, Escalin, Gambaru, Passet, Allemand, Luberon	9[]

6. Similar varieties and differences between 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 pests and diseases

7.2 Special conditions for the examination of the variety

(i) Main use

- ornamental []
- culinary []
- essential oil []
- other (specify) []

7.3 Other information

A representative color photo of the variety should be included in 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.

[Annex follows]

ANNEX

English	Français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
28. Chemical type	Chimiotype				
linalol	linalol			Valdeyron	1
transthuyanol	transthuyanol			Ygor	2
thymol	thymol			Gambaru	3
carvacrol	carvacrol			7.56, Escalin	4
geranol	Géranol			Passet	5
alpha terpineol	Alpha terpineol				6
29. Thymol	Thymol				
absent	Absent			Passet	1
present	Présent			Gambaru	9
30. Carvacrol	Carvacrol				
absent	Absent				1
present	Présent			Escalin	9
31. Linalol	Linalol				
absent	Absent				1
present	Présent			Valdeyron	9
32. Thuyanol	Thuyanol				
absent	Absent				1
present	Présent			Ygor	9
33. Geraniol	Géranol				
absent	Absent			3.07	1
present	Présent			Passet	9
34. Acetate of linalyle	Acétate de linalyle				
absent	Absent				1
present	Présent			Valdeyron	9
35. Acid of myrcenyle	Acide de myrcényle				
absent	Absent				1
present	Présent			Ygor	9
36. Myrcenol	Myrcénol				
absent	Absent				1
present	Présent				9

English	Français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
37 Myrcene	Myrcène				
absent	Absent				1
present	présent			Valdeyron, Ygor	9
38 Alpha terpinene	Alpha terpinène				
absent	Absent				1
present	présent			1.52	9
39 Para cymene	Para cymène				
absent	absent				1
present	présent			Gambaru, 1.52	9
40 Acetate of Geranyle	Acétate de Géranyle				
absent	absent				1
present	présent				9
41 Acetate of Terpenyle	Acétate de Terpényle				
absent	absent				1
present	présent				9
42 Alpha Terpineol	Alpha Terpinéol				
absent	absent			Valdeyron, Passet	1
present	présent			3.46	9

Reference to be given by France

[End of Annex and of document]