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WORKING PAPER ON REVISED DRAFT TEST GUIDELINES FOR BASIL

Document prepared by experts from France

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I. Subject of these Guidelines

These Test Guidelines apply to all varieties of *Ocimum basilicum* L.

II. Material Required

1. The competent authorities decide when, where and in what quantity and quality the seed 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, for each year of test the following quantity of seed is recommended:

- a) seed propagated varieties : 6 g. (or at leastseeds)
- b) vegetatively propagated varieties: 30 plants (20 of them will be planted)

The quality of the seed to be delivered should not be below the standards of seeds for certification or marketing in the country concerned, especially in regard to germination capacity and moisture content.

2. 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 treatments must be given.

III. Conduct of Tests

1. The minimum duration of tests should be two independent growing cycles.
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 growing period. As a minimum, each test should include a total of 40 plants for seed propagated varieties or 20 plants for vegetatively propagated varieties, which should be divided between two or more replicates. 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. All observations determined by measuring or counting should be made on 10 plants or parts of plants taken from each of 10 plants.

2. For the testing of uniformity:
 - Seed propagated varieties: Basil should be tested as a cross-pollinating (allogamous) species. Relative uniformity standards should be applied among the 40 plants.
 - Vegetatively propagated varieties: 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 of 20 plants, the maximum number of off types allowed would be 1.
3. All observations on the leaf should be made on fully developed leaves.

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 of plant or habit (characteristic 1)
 - (b) Leaf blade: anthocyanin coloration of the upper face (characteristic 11)
 - (c) Inflorescence: color of corolla (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 (1 to 9), for the purposes of electronic data processing, are given opposite the states of expression for different characteristic.

3. Legend

(*) Characteristics that should be used every growing period for the examinations of all varieties and should always be included in the descriptions of the variety, 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 / Merkalstabelle/Tabla de caracteres

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
1. Plant: shape of plant (Poland) (*) (+) <i>To be discussed in relation with (3)</i>	Plante: forme de la plante				
rounded (globose)	en boule			Balkonstar, Biborgömb, Fin vert nain compact	1
medium	?			Lemon	2
erect	?			Genovese, Grand vert, Zöldgömb	3
2. Plant: total height (*)	Plante: hauteur totale				
short	courte			Fin vert nain compact	3
medium	moyenne			Lemon	5
tall	haute			Genovese, Grand vert	7
3. Plant: density	Plante: densité				
loose	lâche			Grand vert	3
medium	moyenne			Lemon, Keakenylevely	5
dense	dense			Bubikopf, Fin vert nain compact	7
4. Stem: anthocyanin coloration (*)	Tige: pigmentation anthocyanique				
absent	absente			Grand vert	1
present	présente			Purple Ruffles	9
5. Stem : intensity of anthocyanin coloration	Tige: intensité de la pigmentation anthocyanique				
weak	faible			Anis, Cinnamon	3
medium	moyenne				5
strong	forte			Osmin	7

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
6. Stem: hairiness	Tige: pilosité				
<i>France wants to keep it.</i>					
absent	absente			A feuille de laitue	1
present	présente			Lemon	9
7. Flowering stem : number of flowering shoots	Tige: nombre dinflorescences				
<i>To be placed after 3 (Poland)</i>					
one	une			Lemon	1
three	trois			Feinblattriges	2
more than three	plus de trois			True Thai	3
8. Leaf blade: shape (* (+)	Limbe: forme				
ovate	ovale			Fin vert	1
broad ovate	élliptique large			Italian Large Leaf	2
elliptic	élliptique			Keakenylevelü	3
9. Leaf blade: length	Limbe: longueur				
short	courte			Balkonstar	3
medium	moyenne			Osmin	5
long	longue			Geant Mammouth	7
10. Leaf blade: width	Limbe: largeur				
narrow	étroite			Balkonstar, Keakenylevelü	3
medium	moyenne			Genovese	5
broad	large			A feuille de laitue	7

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
11. (*)	Leaf blade: anthocyanin coloration of upper side	Limbe: pigmentation anthocyanique de la face supérieure				
	absent	absente			Grand vert, Zöldgömb	1
	present	présente			Biborgömb, Purple Ruffles	9
12. (*)	Leaf blade: intensity of anthocyanin coloration of upper side	Limbe: intensité de la pigmentation anthocyanique sur la face supérieure				
	weak	faible			Rothaut	3
	medium	moyenne			Red Rubin	5
	strong	forte			Purple Ruffles	7
13. (*)	<u>Green varieties only:</u> Leaf blade: green color	<u>Variétés vertes seulement:</u> Limbe: couleur verte				
	light	claire			A feuille de laitue	3
	medium	moyenne			Fin vert nain, Lemon	5
	dark	foncée			Sweet Thai	7
14.	<u>Varieties with anthocyanin only:</u> Leaf blade: distribution of anthocyanin	<u>Variétés anthocyanées seulement:</u> Limbe: distribution de la pigmentation anthocyanique				
	mottled	par tâches			Rothaut	1
	major part of surface	sur la majeure partie de la surface			Purple Ruffles	2

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
15.	Leaf blade: glossiness	Limbe: brilliance				
	absent or very weak	absente à très faible			Lemon	1
	weak	faible			Rothaut	3
	medium	moyenne			Osmin	5
	strong	forte			Grand vert	7
	very strong	très forte			Purples Ruffles	9
16.	Leaf blade: blistering					
	absent	absent			Fin vert nain compact	1
	present	present			Genovese	9
17.	Leaf blade: intensity of blistering	Limbe: intensité de la cloqûre				
(*)	weak	faible			Dark Opal, Keakenylevelü	3
	medium	moyenne			Genovese, Grand vert	5
	strong	forte à très forte			A feuille de laitue, Purple Ruffles	7
18.	Leaf blade: shape in cross section	Limbe: forme en section transversale				
(+)	convex	convexe			Genovese, Grand vert	1
	flat	plate			Dark Opal, Rothaut	2
	concave	concave			A feuille de laitue	3
	v-shaped	en v			Lemon	4
19	Leaf blade: dentation of margin					
(*)	absent	absente			Grand vert	1
	present	présente			Purple Ruffles	9

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
20.	Leaf blade: depth of dentation	Limbe: profondeur de la dentelure				
(+)						
	shallow	peu profonde			Italian Large Leaf	3
	medium	moyenne			Osmin, Rubin	5
	deep	profonde			Purple Ruffles	7
21.	Leaf blade: undulation of margin	Limbe: ondulation du bord du limbe				
	absent	absente			Grand vert	1
	present	présente			A feuille de laitue	9
22.	Leaf blade: intensity of undulation	Limbe: intensité de l'ondulation				
	weak	faible				3
	medium	moyenne			Osmin, Rubin	5
	strong	forte			Purple Ruffles	7
23.	Flowering: average length of inter nodes (at the end of flowering)	Hampe Florale: longueur moyenne des entre verticilles (en fin de floraison)				
(+)						
	<i>New proposal</i>					
	short	court			Spicy Bush	3
	medium	moyen			Grand vert	5
	long	long			Feinblattriges	7
24.	Inflorescence : total length (at end of flowering)	Inflorescence: longueur totale (en fin de floraison)				
(+)						
	<i>New proposal</i>					
	short	courte			Bubikopf, Fin vert nain	3
	medium	moyenne			Genovese	5
	long	longue			Lemon	7

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
25.	Inflorescence : hairiness of bracts	Inflorescence: pilosité des bractées				
	absent	absente			Grand vert	1
	present	présente			Lemon	9
26. (*)	Flower: color of corolla	Fleur: couleur de la corolle				
	white	blanche			Genovese, Grand vert	1
	light violet	violet clair			Fin vert	2
	dark violet	violet foncé			Osmin, Rubin	3
27. (*)	Time of flowering (first flower fully developed)	Précocité de floraison (première fleur complètement développée)				
	very early	très précoce			Lemon	1
	early	précoce			Keakenylevelü	3
	medium	moyenne			Genovese, Grand vert	5
	late	tardive			Balkonstar, Rothaut	7
	very late	très tardive			Purple Ruffles	9

Proposals from the thirty-fifth session of the TWV deleted:

- Plant: average length of internodes (ex 24 from TWV/35/10)
-
- Plant: total length of inflorescence (ex 25 from TWV/35/10)
-
- Scent (31 from TWV/35/10)

VIII. Explanations on the Table of Characteristics

Ad. 1: Plant: shape of the plant



1
rounded



2
medium

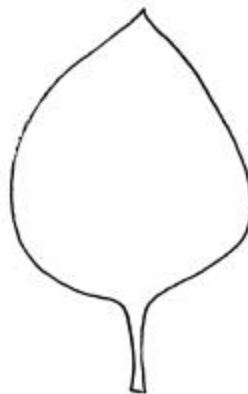


3
erect

Ad. 8: Leaf blade : shape



1
ovale/ ovate



2
ovale large/
broad ovate



3
elliptique/
elliptic

Ad. 18. Leaf blade: shape in cross section



1
convex / convexe



2
plate / flat

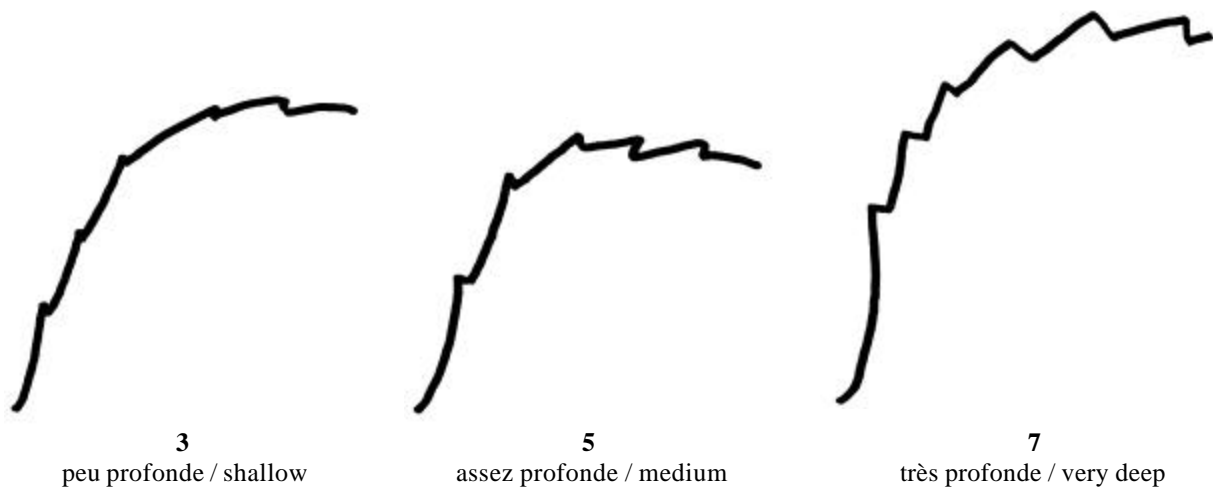


3
concave / concave



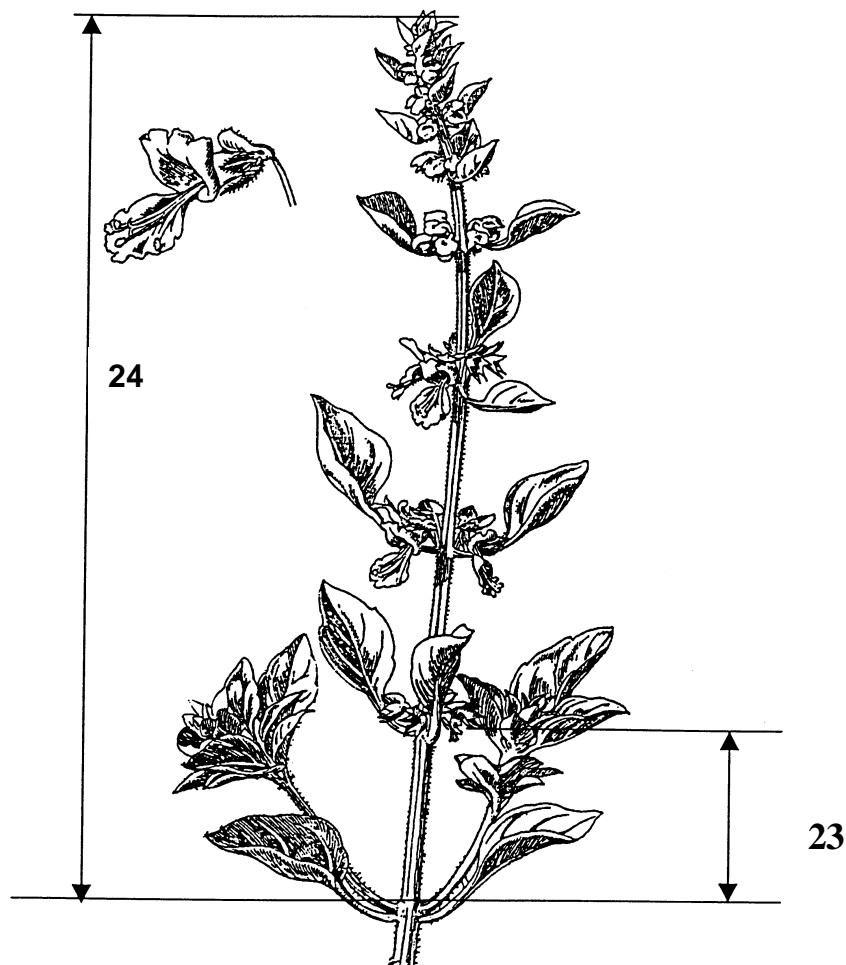
4
en V / V-shaped

Ad. 20: Leaf blade: depth of dentation



Ad. 23: Flowering: average length of internodes (at the end of flowering) and

Ad. 24: Inflorescence: total length (at end of flowering)



IX. Literature

- VILMORIN ANDRIEUX (1989). Les plantes potagères, description et culture des principaux légumes des climats tempérés, Les édition 1900.
- DEBAGGIO T. BELSINGER S., (1942). Basil, An Herb Lover's Guide. Ed. Interwave Press. 144p.
- DACHLER M., PELZMANN H., 1999. "Arznei- und Gewürzpflanzen", Österreichischer Agrarverlag, 2. Auflage 1999, Klosterneuburg.
- HEEGER E.F., 1989. "Handbuch des Arznei- und Gewürzpflanzenbaues", VEB Deutscher Landwirtschaftsverlag Berlin 1989.
- WEYMAR, 1961. "Buch der Lippenblütler und Rauhblattgewächse", Verlag Neumann Berlin und Radebeul 1961.
- VOGEL G., 1996. "Handbuch des speziellen Gemüsebaues", Ulmer Verlag 1996, Stuttgart.

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 style="text-align: center;"><i>Ocimum basilicum</i> L.</p> <p style="text-align: center;">BASIL</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 and breeding method	
4.2 Method of propagation	
(<input type="checkbox"/>) seed propagated	
(<input type="checkbox"/>) vegetatively propagated	

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: shape of plant (1)		
rounded	Balkonstar, Biborgömb, Fin vert nain compact	1[]
medium	Lemon	2[]
erect	Genovese, Grand vert, Zöldgömb	3[]
5.2 Leaf blade: shape (8)		
ovate	Fin vert	1[]
broad ovate	Italian Large Leaf	2[]
elliptic	Keakenylevelü	3[]
5.3 Leaf blade: anthocyanin coloration of upper face (11)		
absent	Grand vert, Zöldgömb	1[]
present	Biborgömb, Purple Ruffles	9[]
5.4 Flower: color of corolla (26)		
white	Genovese, Grand vert	1[]
light violet	Fin vert	2[]
dark violet	Osmin, Rubin	3[]
5.5 Time of flowering (first flower fully developed) (27)		
very early	Lemon	1[]
early	Keakenylevelü	3[]
medium	Genovese, Grand vert	5[]
late	Balkonstar, Rothaut	7[]
very late	Purple Ruffles	9[]

Proposal to add: 16. Leaf blade: blistering / 19. Leaf blade: dentation

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

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

Use:

- Culinary []
- Ornamental []
- Perfumery []
- Medicinal []

7.3 Other information

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.