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INTERNATIONAL UNION  
FOR THE PROTECTION  
OF NEW VARIETIES OF  
PLANTS

UNION INTERNATIONALE  
POUR LA PROTECTION  
DES OBTENTIONS  
VÉGÉTALES

INTERNATIONALER  
VERBAND ZUM SCHUTZ  
VON PFLANZEN-  
ZÜCHTUNGEN

UNIÓN INTERNACIONAL  
PARA LA PROTECCIÓN  
DE LAS OBTENCIONES  
VEGETALES



DRAFT

## GUIDELINES

### FOR THE CONDUCT OF TESTS

### FOR DISTINCTNESS, UNIFORMITY AND STABILITY

**FENNEL**

*(Foeniculum vulgare*  
Miller)

These Guidelines should be read in conjunction with document TG/1/2, which contains explanatory notes on the general principles on which the Guidelines have been established.

<u>TABLE OF CONTENTS</u>	<u>PAGE</u>
I. Subject of these Guidelines .....	3
II. Material Required .....	3
III. Conduct of Tests .....	3
IV. Methods and Observations.....	3
V. Grouping of Varieties .....	4
VI. Characteristics and Symbols .....	4
VII. Table of Characteristics .....	5
VIII. Explanations on the Table of Characteristics .....	11
IX. Literature .....	11
X. Technical Questionnaire .....	12

## I. Subject of these Guidelines

These Test Guidelines apply to all varieties of *Foeniculum vulgare* Miller including varieties with grumolo (*Foeniculum vulgare* ssp. *vulgare* var. *azoricum* (Miller) Thell.) and medicinal/aromatic varieties (*Foeniculum vulgare* ssp. *vulgare* var. *dulce* (DC.) Battand. et Trabut).

## 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. The minimum quantity of seed to be supplied by the applicant in one or several samples should be:

35 g or 4000 seeds.

The seed should at least meet the minimum requirements for germination capacity, moisture content and purity for marketing seed in the country in which the application is made.

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 the treatment must be given.

## III. Conduct of Tests

1. The minimum duration of tests should normally 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 the growing period. Each test should include a total of 60 plants 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. Unless otherwise indicated, all observations determined by measurement, weighting or counting should be made on 20 plants or parts taken from each of 20 plants.

2. For the assessment of uniformity of single-cross hybrid varieties, a population standard of 2% with an acceptance probability of at least 95% should be applied. In the case of a population size of 60 plants, the maximum number of off-types allowed would be 3.

## 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) Grumolo formation (characteristic 10)
- (b) Varieties with grumolo only: bolting tendency (characteristic 21)

## 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 the different characteristics.

3. Legend:

(\*) Characteristics that should be used on all varieties in every growing period over which the 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.

## VIII. Explanations on the Table of Characteristics

### Ad. 23: Male Sterility

Normal (male fertile) varieties show umbels with flowers with normal anthers.

Male sterile varieties show umbels with flowers without anthers or with very deformed, degenerated anthers.

## IX. Literature

Dachler, M., Pelzmann, H. (1999): Arznei- und Gewürzpflanzen. Anbau, Ernte, Aufbereitung. 2<sup>nd</sup> edition. Österreichischer Agrarverlag, Klosterneuburg

Heeger, E.F., Brückner, K. (1950): Heil- und Gewürzpflanzen. Arten- und Sortenkunde. Deutscher Bauernverlag, Berlin.

Mansfeld, R. (1986): Verzeichnis landwirtschaftlicher und gärtnerischer Kulturpflanzen, Band 2, 2<sup>nd</sup> edition, Springer Verlag

X. Technical Questionnaire

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

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

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
<b>5.1</b>	<b>Foliage: intensity of green color</b>		
<b>(6)</b>			
	very light	Pontino	1[ ]
	light	Latina	3[ ]
	medium	Fino	5[ ]
	dark	Rondo	7[ ]
	very dark	Amigo	9[ ]
<b>5.2</b>	<b>Plant: grumolo formation</b>		
<b>(10)</b>			
	absent		1[ ]
	present	Fino	9[ ]
<b>5.3</b>	<b>Only varieties with grumolo:</b>		
<b>(16)</b>	<b>Grumolo: external color</b>		
	whitish	Fino	1[ ]
	green	Carmo, Sirio	2[ ]
<b>5.4</b>	<b>Only varieties with grumolo: bolting tendency</b>		
<b>(21)</b>			
	absent or very weak	Fino, Goal, Pollux	1[ ]
	weak	Tardo	3[ ]
	medium	Clio	5[ ]
	strong	Cristal, Sirio	7[ ]
	very strong	Di Firenze	9[ ]
<b>5.5</b>	<b>Only varieties without grumolo: Time of appearance of main umbel</b>		
<b>(24)</b>			
	early	Berfena	3[ ]
	medium		5[ ]
	late		7[ ]



6. Similar varieties and differences between these varieties

Denomination of similar variety	Characteristic in which the similar variety is different <sup>o)</sup>	State of expression of similar variety	State of expression of candidate variety
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<sup>o)</sup> 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

7.2.1 Use/Growing season:

- |          |     |
|----------|-----|
| – spring | [ ] |
| – summer | [ ] |
| – autumn | [ ] |

7.2.2 Other conditions

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.

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