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GENEVA

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WORKING PAPER ON THE TARIFF DELINEATION FOR PERILLA

Document prepared by experts from the Netherlands

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I. Subject of these Guidelines

These Test Guide lines apply to all (vegetable ?) varieties of *Perilla frutescens* (L.) Britton (*Labiatae*).

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. Applicant's 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:

25g.

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. The germination capacity should be as high as possible.

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 between 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. As a minimum, each test should include a total of 60 plants which should be divided between 2 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 20 plants or parts of 20 plants.

2. For the assessment of uniformity a population standard of 2(?)% for open pollinated varieties with an acceptance probability of 95% should be applied. Where the test is conducted on 60 plants, the maximum number of off -types allowed would be 2/3(?).

3. Unless otherwise indicated, all characteristics of the plant (characteristics ## to ##5) should be recorded on full -grown plants before opening of the first flowers.
4. When disease resistance characteristics are used for assessing distinctness, uniformity and stability, records must be taken under conditions of controlled infection with a defined pathotype. In the case of resistance to downy mildew each race should be tested separately and the result should also be indicated separately.
5. Unless otherwise indicated, all example varieties mentioned in the Table of Characteristics represent the corresponding state of expression under normal growing conditions. The variety descriptions should always state whether the tests have been made under normal growing conditions or, if not, under which other temperature and humidity conditions.

V. Grouping of Varieties

1. The collection to be grown should be divided into groups to facilitate the assessment of distinctness.
2. Suitable characteristics for grouping purposes are those which are known from experience not to vary, or to vary only slightly, within a variety and which in their various states are fairly evenly distributed within the collection.
4. It is recommended that the competent authorities use the following characteristics for grouping varieties:
 - (i) Seed: color of testa (characteristic 2)
 - (ii) Leaf: color of upper side (characteristic 12)
 - (iii) Leaf blade: color of lower side (characteristic 16)

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 the different characteristics.
3. Legend:

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

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
1. Seed: size					
small					3
medium				Perro	5
large				Pergro	7
2. Seed: color of testa (*)					
white					1
grey					2
beige				Pergro	3
ochre-yellow					4
brown				Perro	5
purplish					6
3. Seedling: color (*)					
green				Pergro	1
purplish red				Perro	2
4. Plant: branching (at a height of 10 – 15 cm)					
absent or very weak					1
weak				Pergro	3
medium					5
strong					7
very strong					9

Korea proposes: Number of branches 3 -small; 5 -medium; 7 -large

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
5. Plant:height					
low					3
medium				Perro	5
high				Pergro	7
6. Stem:cross -section					
circular					1
ribbed				Perro	2
square				Pergro	3
7. Stem:hairiness					
absentorveryweak					1
weak				Perro	3
medium					5
strong				Pergro	7
verystrong					9
8. Stem:amountof hairs					
sparse				Perro	3
medium					5
dense				Pergro	7
9. Leaf:length					
short					3
medium				Perro	5
long				Pergro	7

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
10. Leaf:width					
narrow					3
medium				Perro	5
broad				Pergro	7
11. Leaf:shape					
lanceolate					1
triangular/ovate					2
circular					3
heart-shaped				Pergro	4
12. Leaf:color of (*) upperside					
yellowishgreen					1
green					2
greyishgreen				Pergro	3
purplish				Perro	4
13. Leaf:intensity of greencolor of upperside					
light				var.crispa	3
medium					5
dark					7
14. Leafblade:intensity ofpurplishcolor of upperside					
light					3
medium					5
dark				Perro	7

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
15. Leafblade: glossiness of upper surface					
weak					3
medium					5
strong					7
16. Leafblade: color of (*) lower side					
greenish				Pergro	1
purplish				Hojiso, Perro, Perlime	2
17. Leafblade: intensity of purplish color of lower side					
absent or very light					1
light				Perlme	3
medium					5
dark				Perro	7
very dark					9
18. Leafblade: profile					
concave				Perro	3
flat				Pergro	5
convex					7
19. Leafblade: blistering					
absent or very weak					1
weak				Pergro	3
medium				Perro	5
strong					7
very strong					9

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
20. Leafblade: crimping/folding (*)					
absent or very weak				Pergro	1
weak					3
medium				Perro	5
strong					7
very strong					9
21. Leafblade: incisions of margin					
absent or very weak					1
weak					3
medium					5
strong				Pergro	7
very strong					9
22. Leafblade: type of incision of margin					
crenate					1
serrate				Pergro	2
dentate				Perro	3
23. Leafblade: depth of incisions of margin					
shallow					3
medium					5
deep					7
24. Inflorescence: position					
terminal					1
axillar				Pergro	2

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
25. Inflorescence: number of clusters	<i>(in case of axillar/or inflorescences clusters)</i>				
few					3
medium					5
many					7
26. Inflorescence: length of clusters (if almost all flowers open)					
short					3
medium					5
long					7
26. Flower: size					
small				Pergro	3
medium					5
large					7
27. Flower: color					
white				Pergro	1
reddishpurple					2
28. Flower: intensity of reddishpurple					
light					3
medium					5
dark					7

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
29. Calyx:anthocyanin coloration					
absent or very weak					1
weak					3
medium					5
strong					7
very strong					9
30. Time of flowering					
early					3
medium					5
late					7
31. Time of maturity					
early					3
medium					5
late					7
32. 1000-seed-weight					
low					3
medium					5
high					7

VIII. Explanations on the Table of Characteristics

Ad. 12and15:Leafblade:colorofupperandlowerside



green/green



green/purplish



purple/purple

Ad. 19:Leafblade:crimping(orcrinkling)



absentorveryweak



strong

IX. Literature

- BRENNER, D.M., 1993: Perilla, Botany, Uses and Genetic Resources, In: J.Janick and J.E.Simon(Eds), New Crops, Wiley, New York. pp322 -328.
- BURGMANS, J., & SCHEFFER, J.,: Perilla –an Asian Culinary Herb, Ruakura Agric. Research Center, New Zealand.
- KOEZUKA, Y., HONDA, G. and TABATA, M., 1985: Genetic control of anthocyanin production, Shoyakugaku Zasshi 39:228 -231.
- TANAKA, T., 1976: Tanaka's cyclopedia of edible plants of the world, Keigaku Publishing Co., Tokyo

X. Technical Questionnaire

	ReferenceNumber (nottobefilledinbytheapplicant)
<p>TECHNICAL QUESTIONNAIRE tobecompletedinconnectionwithanapplicationforplantbreeders' rights</p>	
1. Species	<p><i>Perillafrutescens</i>(L.)Britton PERILLABEEFSTEAKPLANT</p>
2. Applicant(Nameandaddress)	
3. Proposeddenominationorbreeder'sreference	
4. Informationonorigin,maintenanceandreproductionofthevariety	

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 Seed:coloroftesta (2)		
beige	Pergro	1[]
ochre-yellow		2[]
brown	Perro	3[]
purplish		4[]
5.2 Seedling:color (3)		
green	Pergro	1[]
Purplishred	Perro	2[]
5.3 Leafblade:colorofupperside (12)		
yellowishgreen		1[]
green		2[]
greyishgreen	Pergro	3[]
purplish	Perro	4[]
5.4 Leafblade:coloroflowerside (16)		
greenish	Pergro	1[]
purplish	Perro	2[]
5.5 Leafblade :blistering (19)		
absentorveryweak	Pergro	1[]
weak		3[]
medium	Perro	5[]
strong		7[]
verystrong		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

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) Type of culture

- in glasshouse / as a sprout vegetable
- in the open / as an ornamental
- in the open / as an oilseed crop

(ii) Season of growing

- spring
- summer
- autumn
- winter

(iii) 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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