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TG/161/3

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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

GUIDELINES

FOR THE CONDUCT OF TESTS

FOR DISTINCTNESS, UNIFORMITY AND STABILITY

WELSH ONION, JAPANESE BUNCHING ONION

(*Allium fistulosum* L.)

GENEVA
1998

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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.

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7I. Subject of these Guidelines

These Test Guidelines apply to all seed and vegetatively propagated varieties of *Allium fistulosum* L. excluding *A. cepa x fistulosum* hybrids such as Bettsville Bunching, and *A. fistulosum* var. *viviparum.*

II. Material Required

1. The competent authorities decide when, where and in what quantity and quality the plant material or 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 plant material or seed to be supplied by the applicant in one or several samples should be:

(a) Seed propagated varieties: 60 g of seed
(b) Vegetatively propagated varieties: 200 plants.

The seed should, depending on the case, at least meet the minimum requirements for germination capacity, moisture content and purity for marketing seed or plant material 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 two similar growing periods.

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 200 plants for seed propagated varieties and 100 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 measurement or counting should be made on 60 plants or parts of 60 plants.

2. For the assessment of uniformity of vegetatively propagated varieties, a population standard of 1% with an acceptance probability of at least 95% should be applied. In the case of a sample size of 100 plants the maximum number of off-types allowed would be 3.

3. For the assessment of uniformity of open-pollinated and hybrid varieties relative uniformity standards should be applied.

4. All observations on the leaf should be made on fully developed plants. When more than one pseudostem exists observations should be made on the largest pseudostem and on its leaves, scape and flowers.

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: growth type (characteristic 1)
(b) Leaf: diameter (characteristic 10)
(c) Pseudostem: anthocyanin coloration (characteristic 15)

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 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.

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 type**	**Plante: port**	**Pflanze: Wuchstyp**	**Planta: porte**		
	single pseudostem	une seule fausse tige	eintriebig	un pseudotallo	Shimonida, Ishikura	1
	multi-pseudostem	plusieurs fausses tiges	mehrtriebig	varios pseudotallos	White Spear (F1), Satonoka	2
2. (*)	**For multi-pseudostem varieties only** **Plant: number of pseudostems**	**Seulement pour les variétés à plusieurs fausses tiges** **Plante: nombre de fausses tiges**	**Nur für mehrtriebige Sorten** **Pflanze: Anzahl Pseudostämme**	**Sólo para variedades de varios pseudotallos** **Planta: número de pseudotallos**		
	few	petit	gering	bajo	Redhead	3
	medium	moyen	mittel	medio	Spring Slim	5
	many	grand	groß	alto	Winterhecke	7
3. (*) (+)	**Plant: height**	**Plante: hauteur**	**Pflanze: Höhe**	**Planta: altura**		
	short	courte	niedrig	corta	Winterhecke, Kuronobori	3
	medium	moyenne	mittel	media	Ishikura, Kiyotaki White Long	5
	tall	longue	hoch	larga	Kaigaro, Zita	7
4. (*)	**Plant: number of leaves per pseudostem**	**Plante: nombre de feuilles par fausse tige**	**Pflanze: Anzahl Blätter pro Pseudostamm**	**Planta: número de hojas por pseudotallo**		
	few	petit	gering	bajo		3
	medium	moyen	mittel	medio	Ishikura	5
	many	grand	groß	alto	Kuronobori	7

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
5. (*)	**Foliage: attitude**	**Feuillage: port**	**Laub: Haltung**	**Follaje: porte**		
	erect	dressé	aufrecht	erecto	Kuronoboi	1
	semi-erect	demi-dressé	halbaufrecht	semierecto	Ishikura	3
	horizontal	horizontal	waagerecht	horizontal		5
6.	**Foliage: waxiness**	**Feuillage: glaucescence**	**Laub: Bereifung**	**Follaje: glauescencia**		
	weak	faible	gering	débil		3
	medium	moyenne	mittel	media	Ishikura	5
	strong	forte	stark	fuerte	Shimonida	7
7. (*)	**Foliage: hue of green color**	**Feuillage: teinte de la couleur verte**	**Laub: Ton der Grünfärbung**	**Follaje: tonalidad del color verde**		
	absent	absente	fehlend	ausente	Ishikura	1
	yellowish	jaunâtre	gelblich	amarillento	Kujho Asaki	2
	bluish	bleuâtre	bläulich	azulado		3
8.	**Only for varieties with additional hue absent:** **Foliage: intensity of green color**	**Seulement pour des variétés sans teinte supplémentaire:** **Feuillage: intensité de la couleur verte**	**Nur für Sorten mit fehlender zusätzlicher Tönung:** **Laub: Intensität der Grünfärbung**	**Solamente para variedades sin tonalidad adicional:** **Follaje: intensidad del color verde**		
	light	claire	hell	claro	Kujo Green	3
	medium	moyenne	mittel	medio	Winterhecke, Satonoka	5
	dark	foncée	dunkel	oscuro	Kaigaro, Zita	7
9. (*)	**Leaf: length**	**Feuille: longueur**	**Blatt: Länge**	**Hoja: longitud**		
	short	courte	kurz	corta	Kuronobori	3
	medium	moyenne	mittel	media		5
	long	longue	lang	larga		7

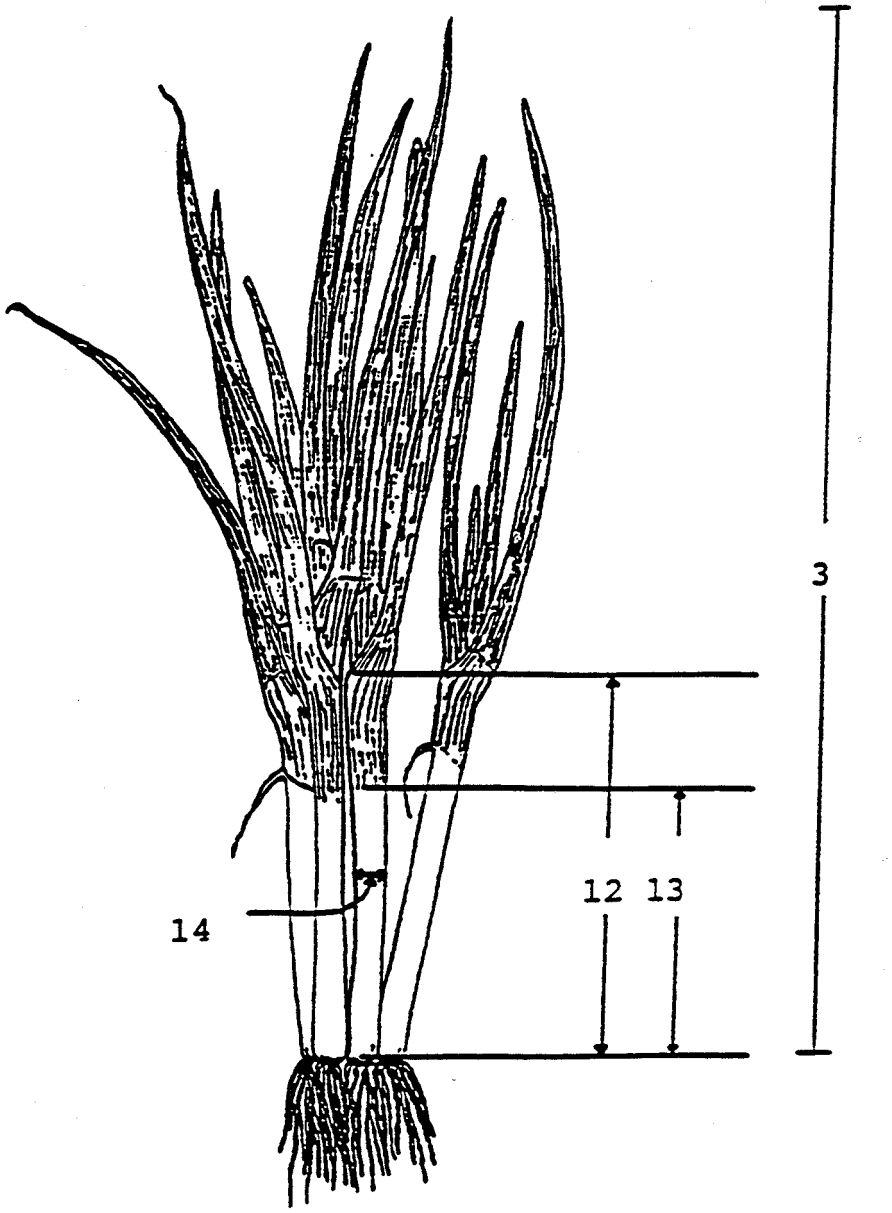
	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
10. (*)	**Leaf: diameter**	**Feuille: diamètre**	**Blatt: Durchmesser**	**Hoja: diámetro**		
	small	petit	klein	pequeño	Winterhecke	3
	medium	moyen	mittel	medio	Satonoka, Ishikura	5
	large	grand	groß	grande	Feast	7
11.	**Leaf: curvature**	**Feuille: courbure**	**Blatt: Biegung**	**Hoja: curvatura**		
	absent or very weak	nulle à très faible	fehlend oder sehr gering	ausente o muy débil	Ishikura	1
	weak	faible	gering	débil	Terry	3
	medium	moyenne	mittel	media	Terry Spezial	5
	strong	forte	stark	fuerte	Satonoka	7
	very strong	très forte	sehr stark	muy fuerte	Winterhecke	9
12. (*) (+)	**Pseudostem: length**	**Fausse tige: longueur**	**Pseudostamm: Länge**	**Pseudotallo: longitud**		
	short	courte	kurz	corto		3
	medium	moyenne	mittel	mediano		5
	long	longue	lang	largo		7
13. (+)	**Pseudostem: length of blanched column**	**Fausse tige: longueur de la partie blanche**	**Pseudostamm: Länge des gebleichten Teiles**	**Pseudotallo: longitud de la parte blanqueada**		
	short	courte	kurz	corta	Shimonida	3
	medium	moyenne	mittel	mediana	Kuronobori	5
	long	longue	lang	larga		7
14. (+) (*)	**Pseudostem: diameter**	**Fausse tige: diamètre**	**Pseudostamm: Durchmesser**	**Pseudotallo: diámetro**		
	small	petit	klein	pequeño	Rouge	3
	medium	moyen	mittel	medio	Spring Slim	5
	large	grand	groß	grande	Kaigaro	7

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
15. (*)	**Pseudostem: anthocyanin coloration**	**Fausse tige: pigmentation anthocyanique**	**Pseudostamm: Anthocyanfärbung**	**Pseudotallo: pigmentación antociánica**		
	absent	absente	fehlend	ausente	Winterhecke, Ishikura	1
	present	présente	vorhanden	presente	Redhead	9
16. (*)	**Pseudostem: bulbing**	**Fausse tige: Bulbaison**	**Pseudostamm: Bulbenbildung**	**Pseudotallo: formación de bulbo**		
	absent or very weak	nulle à très faible	fehlend oder sehr gering	ausente o muy débil		1
	weak	faible	gering	débil		2
	strong	forte	stark	fuerte		3
17.	**Tendency to bolting**	**Résistance à la montaison**	**Neigung zum Schossen**	**Tendencia a la salida a flor**		
	absent or very weak	nulle à très faible	fehlend oder sehr gering	ausente o muy débil	Bozushirazu	1
	weak	faible	gering	débil		3
	medium	moyenne	mittel	media		5
	strong	forte	stark	fuerte		7
	very strong	très forte	sehr stark	muy fuerte		9
18. (+)	**Bolting stem: scape length (in second year)**	**Hampe florale: longueur de la hampe (en deuxième année)**	**Schosstrieb: Länge des Schaftes (im zweiten Jahr)**	**Tallo floral: longitud del escapo floral (en el segundo año)**		
	short	courte	kurz	corto	Shimonida	3
	medium	moyenne	mittel	mediano	Ishikura	5
	long	longue	lang	largo		7
19.	**Time of flowering**	**Époque de floraison**	**Zeitpunkt des Blühbeginns**	**Fecha de floración**		
	early	précoce	früh	temprana		3
	medium	moyenne	mittel	mediana	Ishikora	5
	late	tardive	spät	tardía	Koronobori	7

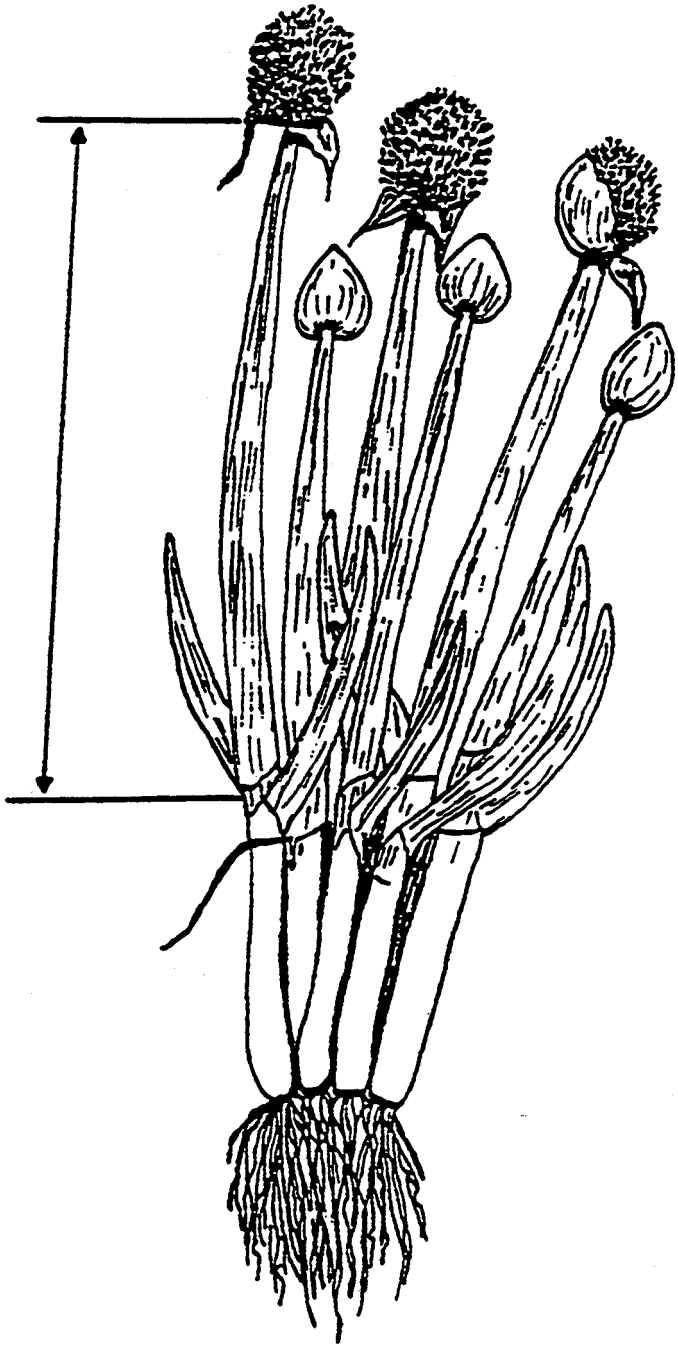
	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
20.	**Male sterility**	**Stérilité mâle**	**Männliche Sterilität**	**Androesterilidad**		
	absent	absente	fehlend	ausente		1
	present	présente	vorhanden	presente		9

VIII. Explanations on the Table of Characteristics

Ad. 3, 12, 13, 14: Plant: height (3), Pseudostem: length (12), length of blanched column (13) and diameter (14)



Ad. 18: Bolting stem: scape length (in the second year)



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X. Technical Questionnaire

	Reference Number (not to be filled in by the applicant)

TECHNICAL QUESTIONNAIRE
to be completed in connection with an application for plant breeders' rights

1. Species	*Allium fistulosum* L. WELSH ONION, JAPANESE BUNCHING ONION
2. Applicant (Name and address)	
3. Proposed denomination or breeder's reference	

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

4.1 Variety type

(a) Open-pollinated variety [ ]

(b) Single hybrid [ ]

(c) Three-way hybrid [ ]

(d) Clone [ ]

(e) Other type (indicate type) [ ]

.....

4.2 Genetic origin and breeding method

(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 authorization.

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 (1)	**Plant: growth type**		
	single pseudostem	Shimonida, Ishikura	1[ ]
	multi- pseudostem	White Spear (F1), Satonoka	2[ ]
5.2 (2)	**For multi-pseudostem varieties only** **Plant: number of pseudostems**		
	few	Redhead	3[ ]
	medium	Spring Slim	5[ ]
	many	Winterhecke	7[ ]
5.3 (3)	**Plant: height**		
	short	Winterhecke, Kuronobori	3[ ]
	medium	Ishikura, Kiyotaki, White Long	5[ ]
	tall	Kaigaro, Zita	7[ ]
5.4 (10)	**Leaf: diameter**		
	small	Winterhecke	3[ ]
	medium	Satonoka, Ishikura	5[ ]
	large	Feast	7[ ]
5.5 (12)	**Pseudostem: length**		
	short		3[ ]
	medium		5[ ]
	long		7[ ]

	Characteristics	Example Varieties	Note
5.6 (14)	**Pseudostem: diameter**		
	small	Rouge	3[ ]
	medium	Sprin Slim	5[ ]
	large	Kaigaro	7[ ]
5.7 (15)	**Pseudostem: anthocyanin coloration**		
	absent	Winterhecke, Ishikura	1[ ]
	present	Redhead	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

[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

7.2.1 Time of sowing:

- Spring [ ]
- Autumn [ ]

7.2.2 Blanching culture

- blanching [ ]
- non- blanching [ ]

7.3 Male sterility

- absent [ ]
- present [ ]

7.4 Other information

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