



These Test Guidelines have been superseded by a later version. The latest adopted version of Test Guidelines can be found at http://www.upov.int/test_guidelines/en/list.jsp

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Ces principes directeurs d'examen ont été remplacés par une version ultérieure. La version adoptée la plus récente des principes directeurs d'examen figure à l'adresse suivante : http://www.upov.int/test_guidelines/fr/list.jsp

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Diese Prüfungsrichtlinien wurden durch eine neuere Fassung ersetzt. Die neueste angenommene Fassung von Prüfungsrichtlinien ist unter http://www.upov.int/test_guidelines/en/list.jsp zu finden.

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Las presentes directrices de examen han sido reemplazadas por una versión posterior. La versión de las directrices de examen de más reciente aprobación está disponible en http://www.upov.int/test_guidelines/es/list.jsp.

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TG/85/6

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

LEEK

(Allium porrum L.)

GENEVA
1999

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TG/85/6

ORIGINAL: English

DATE: 1999-03-24

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(Allium porrum L.)

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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I. Subject of these Guidelines

These Test Guidelines apply to all varieties of *Allium porrum* L.

II. Material Required

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

- (a) seed propagated varieties: 75 g.
- (b) vegetatively propagated varieties: 75 plants of normal transplantation size.

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 seed and 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. Each test should include a total of 200 single spaced plants for seed propagated varieties and 60 plants for vegetatively propagated varieties. In all cases the total number of plants 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 60 plants or parts taken from each of 60 plants.
2. For the assessment of uniformity of open pollinated and hybrid varieties relative uniformity standards should be applied.
3. For the assessment 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 60 single spaced plants the maximum number of off-types allowed would be 2.
4. All observations should be made at harvest maturity.
5. Unless otherwise indicated, all observations on the leaf blade should be made on the fully developed leaf.
6. All observations on the flower should be made at full flowering.

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: length (characteristic 2)
 - (b) Leaf blade: color (characteristic 7)
 - (c) Shaft: length (characteristic 12)

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.

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	Pflanze: Höhe	Planta: altura		
short	basse	niedrig	baja	D'Hiver de Saint Victor	3
medium	moyenne	mittel	media	Bleu de Solaise	5
tall	haute	hoch	alta	Hafnia, Long géant du Verdet	7
2. Plant: length (* (+)	Plante: longueur	Pflanze: Länge	Planta: longitud		
short	courte	kurz	corta	De Carentan	3
medium	moyenne	mittel	media	Bleu de Solaise, Jaune gros du Poitou	5
long	longue	lang	larga	Kong Richard, Rese, Titan	7
3. Plant: density of leaves (+)	Plante: densité des feuilles	Pflanze: Dichte der Blätter	Planta: densidad del follaje		
loose	lâche	locker	laxo		3
medium	moyenne	mittel	medio	Parton	5
dense	dense	dicht	denso		7
4. Foliage: attitude (* (+)	Feuillage: port	Laub: Haltung	Follaje: porte		
erect	dressé	aufrecht	erecto	Rese	1
semi-erect	demi-dressé	halbaufrecht	semierecto		3
horizontal	horizontal	waagerecht	horizontal	Jaune gros du Poitou	5
5. Leaf blade: length of longest blade (+)	Limbe: longueur du limbe le plus long	Blattspreite: Länge der längsten Blattspreite	Limbo: longitud del limbo más largo		
short	court	kurz	corto	Conora, D'Elbeuf, Kalmar	3
medium	moyen	mittel	medio	Carlton, Porridor, Rese	5
long	long	lang	largo	Arial, Kong Richard, Maxim	7

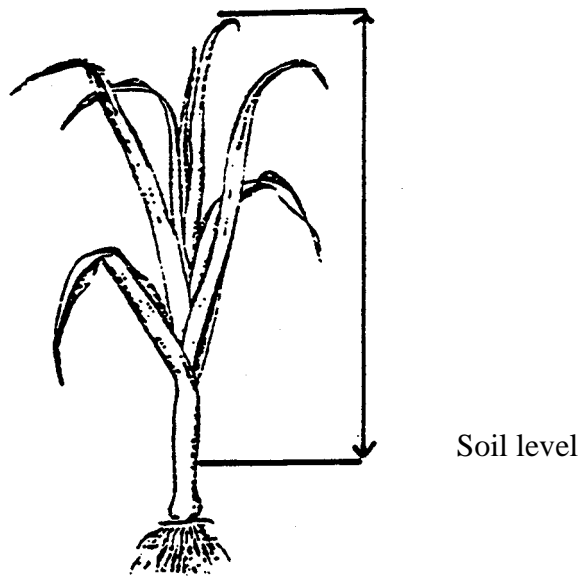
English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
6. (*)	Leaf blade: width	Limbe: largeur	Blattspreite: Breite	Limbo: anchura	
narrow	étroit	schmal	estrecho	Rustic	3
medium	moyen	mittel	medio	De Liège	5
broad	large	breit	ancho	Jaune gros du Poitou, Rese	7
7. (*)	Leaf blade: color	Limbe: couleur	Blattspreite: Farbe	Limbo: color	
yellow-green	vert-jaune	gelbgrün	verde amarillo	Jaune gros du Poitou	1
green	vert	grün	verde	Premier	2
grey-green	vert-gris	graugrün	verde gris	Zwitserse Reuzen	3
blue-green	vert-bleu	blaugrün	verde azul	Libertas, Olaf , Porridor	4
8.	Leaf blade: intensity of color	Limbe: intensité de la couleur	Blattspreite: Intensität der Farbe	Limbo: intensidad del color	
light	claire	hell	clara	Gros long d'été 2, Rese	3
medium	moyenne	mittel	media	D'Hiver de Saint Victor	5
dark	foncée	dunkel	oscura		7
9. (*)	Leaf blade: anthocyanin coloration	Limbe: pigmentation anthocyanique	Blattspreite: Anthocyanfärbung	Limbo: pigmentación antociánica	
absent or very weak	nulle ou très faible	fehlend oder sehr gering	ausente o muy débil	Jaune gros du Poitou	1
weak	faible	gering	débil	Azur	3
medium	moyenne	mittel	media		5
strong	forte	stark	fuerte	Nepal	7
very strong	très forte	sehr stark	muy fuerte	D'Hiver de Saint Victor	9

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
10. Leaf blade: waxiness	Limbe: glaucescence	Blattspreite: Bereifung	Limbo: cerosidad		
absent or very weak	absente ou très faible	fehlend oder sehr gering	ausente o muy débil	Jaune gros du Poitou	1
weak	faible	gering	débil	Gros long d'été 2, Rese	3
medium	moyenne	mittel	media	D'Elbeuf	5
strong	forte	stark	fuerte	Bleu de Solaise	7
very strong	très forte	sehr stark	muy fuerte		9
11. Leaf blade: grooving	Limbe: cannelure	Blattspreite: Riefung	Limbo: acanalado		
absent	absente	fehlend	ausente	Franse Zomer	1
present	présente	vorhanden	presente	D'Hiver de Saint Victor	9
12. Shaft: length (* (+)	Fût: longueur	Schaft: Länge	Fuste: longitud		
very short	très court	sehr kurz	muy corto		1
short	court	kurz	corto	Bleu de Solaise, D'Hiver de Saint Victor	3
medium	moyen	mittel	medio	Gros long d'été 2	5
long	long	lang	largo	Maxim	7
very long	très long	sehr lang	muy largo	Kong Richard	9
13. Shaft: diameter (*	Fût: diamètre	Schaft: Durchmesser	Fuste: diámetro		
very small	très petit	sehr klein	muy pequeño		1
small	petit	klein	pequeño	Titan	3
medium	moyen	mittel	medio	Géant précoce	5
large	grand	groß	grande	Premier	7
very large	très grand	sehr groß	muy grande	Jaune gros du Poitou	9

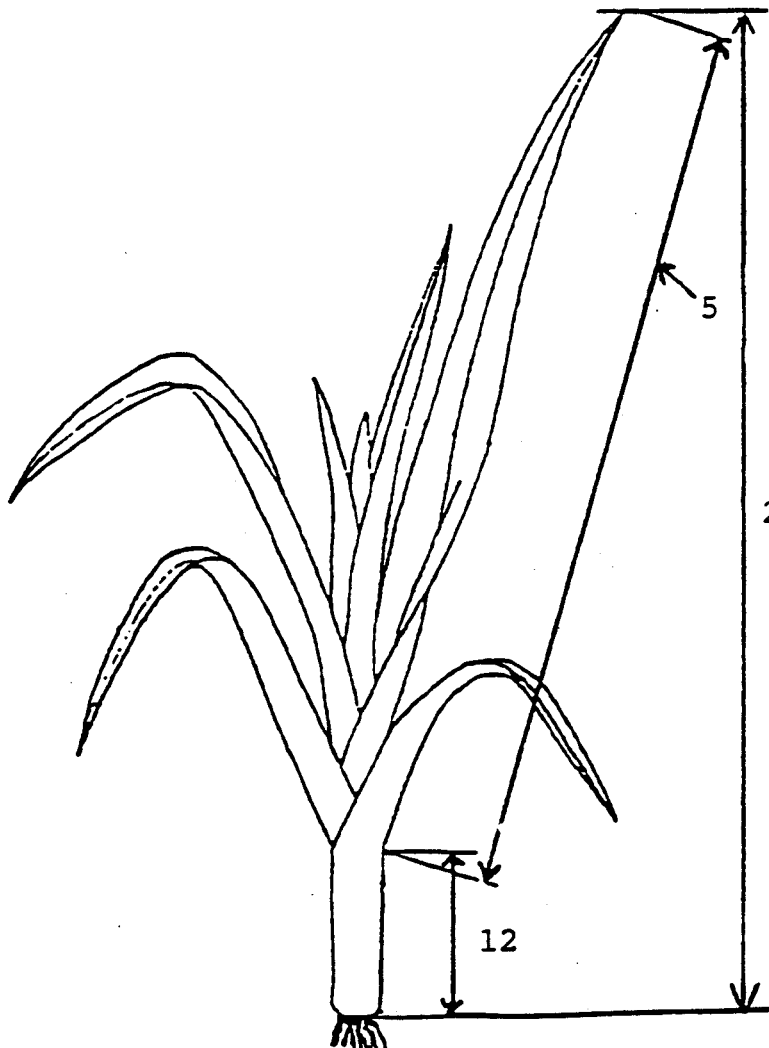
English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
14. Shaft: ratio length/diameter	Fût: rapport longueur/diamètre	Schaft: Verhältnis Länge/Durchmesser	Fuste: relación longitud/diámetro		
small	petit	klein	pequeño	D'Hiver de Saint Victor	3
medium	moyen	mittel	medio		5
large	grand	groß	grande	Bulgarse Reuzen	7
15. Shaft: bulb formation (*)	Fût: tendance à former un bulbe	Schaft: Zwiebelbildung	Fuste: tendencia a formar un bulbo		
absent or very weak	nulle ou très faible	fehlend oder sehr gering	ausente o muy baja		1
weak	faible	gering	baja	Hafnia, Titan	3
medium	moyenne	mittel	media	Bleu de Solaise, Premier	5
strong	forte	stark	fuerte	Jaune gros du Poitou	7
very strong	très forte	sehr stark	muy fuerte		9
16. Shaft: narrowing towards base (+)	Fût: rétrécissement vers la base	Schaft: Verjüngung zur Basis hin	Fuste: estrechamiento hacia la base		
absent	absent	fehlend	ausente	Herfstreuzen 2	1
present	présent	vorhanden	presente	Lavi, Rese, Titan	9
17. Flower: color	Fleur: couleur	Blüte: Farbe	Flor: color		
white	blanche	weiß	blanca	Alma	1
pink	rose	rosa	rosa		2
violet	violette	violett	violeta		3
18. For vegetatively propagated varieties only: Flower: male sterility (*)	Pour des variétés à multiplication végétative seulement: Fleur: stérilité masculine	Nur für vegetativ vermehrte Sorten: Blüte: männliche Sterilität	Para variedades reproducidas vegetativamente solamente: Flor: esterilidad masculina		
absent	absente	fehlend	ausente		1
present	présente	vorhanden	presente		9

VIII. Explanation on the Table of Characteristics

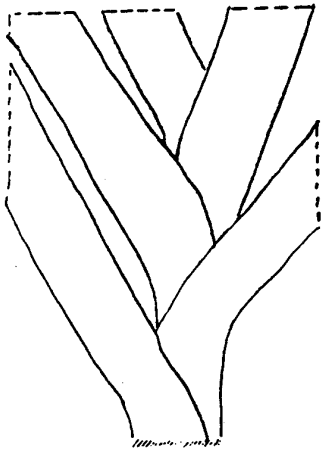
Ad. 1: Plant: height



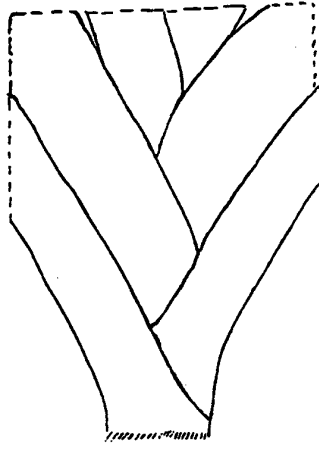
Ad. 2, 5 and 12: Plant: length (2), Leaf blade: length of longest blade (5) and Shaft: length (12)



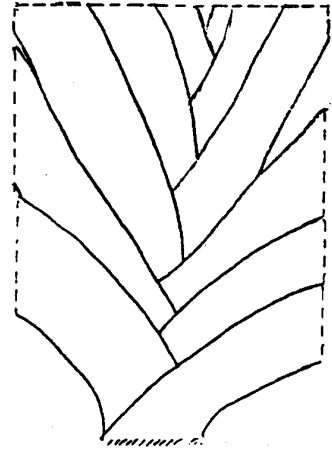
Ad. 3: Plant: density of leaves



3
loose

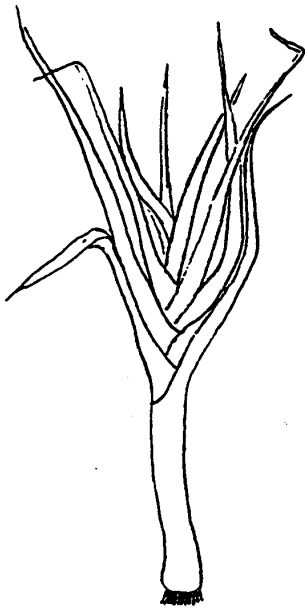


5
medium

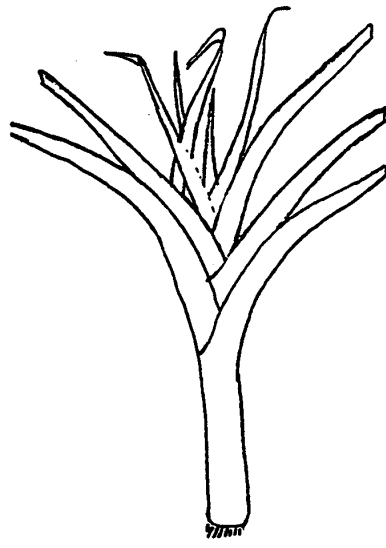


7
dense

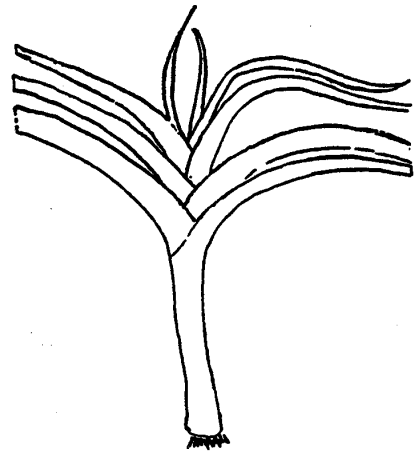
Ad. 4: Foliage: attitude



1
erect

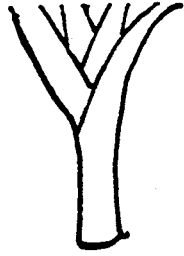


3
semi-erect

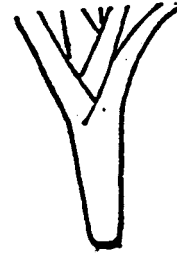


5
horizontal

Ad. 16: Shaft: narrowing towards base



1
absent



9
present

IX. Literature

Bonnet, B., 1976: "Le poireau (*Allium porrum* L.): Aspects botaniques et agronomiques" - revue bibliographique. Saussurea 7. 175-194

Currah, L., 1986: "Leek breeding: A review." Review Article. Journal of Horticultural Science 61. (4) 407-415

Jones, H.A. and Mann, L.K., 1963: "Onions and Their Allies: Botany, Cultivation and Utilisation", London, Leonard Hill

Rabinowitch, H. D. and Brewster, J. L., 1990: "Onions and Allied Crops", Vol. 1-3, CRC Press, Boca Raton

Schweisguth, B., 1970: "Études préliminaires a l'amélioration du poireau *A. porrum* L." Proposition d'une méthode d'amélioration. Annales de l'Amélioration des Plantes. 20. 215-231

Schweisguth B., 1973: "Étude de l'hérédité de trois caractères quantitatifs chez le poireau (*Allium porrum* L.)." Annales de l'Amélioration des Plantes. 23. 45-57

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>Allium porrum</i> L. LEEK</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 Method of maintenance and reproduction

(a) open pollinated variety

..... []

(b) hybrid (based on at least one clonal parent)

..... []

(c) vegetatively propagated

..... []

(d) others (please indicate)

..... []

4.2 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: length (2)		
short	De Carentan	3[]
medium	Bleu de Solaise, Jaune gros du Poitou	5[]
long	Kong Richard, Rese, Titan	7[]
5.2 Leaf blade: width (6)		
narrow	Rustic	3[]
medium	De Liège	5[]
broad	Jaune gros du Poitou, Rese	7[]
5.3 Leaf blade: color (7)		
yellow-green	Jaune gros du Poitou	1[]
green	Premier	2[]
grey-green	Zwitserse Reuzen	3[]
blue-green	Libertas, Olaf, Porridor	4[]
5.4 Leaf blade: anthocyanin coloration (9)		
absent or very weak	Jaune gros du Poitou	1[]
weak	Azur	3[]
medium		5[]
strong	Nepal	7[]
very strong	D'Hiver de Saint Victor	9[]

Characteristics	Example Varieties	Note
5.5 Shaft: length (12)		
very short		1[]
short	Bleu de Solaise, D'Hiver de Saint Victor	3[]
medium	Gros long d'été 2	5[]
long	Maxim	7[]
very long	Kong Richard	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

(a) Growing season:

- spring []
- summer []
- autumn []
- winter []

(b) 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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