



TG/85/7

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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS
GENEVA

<p>LEEK</p> <p>UPOV Code: ALLIU_POR</p> <p><i>Allium porrum</i> L.</p>

GUIDELINES

FOR THE CONDUCT OF TESTS

FOR DISTINCTNESS, UNIFORMITY AND STABILITY

Alternative Names:*

<i>Botanical name</i>	<i>English</i>	<i>French</i>	<i>German</i>	<i>Spanish</i>
<i>Allium porrum</i> L.	Leek	Poireau	Porree	Puerro

The purpose of these guidelines (“Test Guidelines”) is to elaborate the principles contained in the General Introduction (document TG/1/3), and its associated TGP documents, into detailed practical guidance for the harmonized examination of distinctness, uniformity and stability (DUS) and, in particular, to identify appropriate characteristics for the examination of DUS and production of harmonized variety descriptions.

ASSOCIATED DOCUMENTS

These Test Guidelines should be read in conjunction with the General Introduction and its associated TGP documents.

* These names were correct at the time of the introduction of these Test Guidelines but may be revised or updated. [Readers are advised to consult the UPOV Code, which can be found on the UPOV Website (www.upov.int), for the latest information.]

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1. Subject of these Test Guidelines

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

2. Material Required

2.1 The competent authorities decide on the quantity and quality of the plant material required for testing the variety and when and where it is to be delivered. Applicants submitting material from a State other than that in which the testing takes place must ensure that all customs formalities and phytosanitary requirements are complied with.

2.2 The material is to be supplied in the form of seed in the case of seed-propagated varieties, or in the form of plants in the case of vegetatively propagated varieties.

2.3 The minimum quantity of plant material, to be supplied by the applicant, should be:

75 g or 13,000 seeds in the case of seed-propagated varieties, or
75 plants of normal transplantation size in the case of vegetatively propagated varieties.

2.4 In the case of seed, the seed should meet the minimum requirements for germination, species and analytical purity, health and moisture content, specified by the competent authority.

2.5 The plant material supplied should be visibly healthy, not lacking in vigor, nor affected by any important pest or disease.

2.6 The plant material should not have undergone any treatment which would affect the expression of the characteristics of the variety, unless the competent authorities allow or request such treatment. If it has been treated, full details of the treatment must be given.

3. Method of Examination

3.1 *Number of Growing Cycles*

3.1.1 In the case of seed, the minimum duration of tests should normally be two independent growing cycles.

3.1.2 In the case of plants, the minimum duration of tests should normally be a single growing cycle.

3.2 *Testing Place*

Tests are normally conducted at one place. In the case of tests conducted at more than one place, guidance is provided in TGP/9 "Examining Distinctness".

3.3 *Conditions for Conducting the Examination*

3.3.1 The tests should be carried out under conditions ensuring satisfactory growth for the expression of the relevant characteristics of the variety and for the conduct of the

examination. The length of shaft (characteristic 11) cannot be satisfactorily observed if the material is planted too deep.

3.3.2 The recommended method of observing the characteristic is indicated by the following key in the second column of the Table of Characteristics:

- MG: single measurement of a group of plants or parts of plants
- MS: measurement of a number of individual plants or parts of plants
- VG: visual assessment by a single observation of a group of plants or parts of plants
- VS: visual assessment by observation of individual plants or parts of plants”

3.4 *Test Design*

3.4.1 In the case of seed-propagated varieties, each test should be designed to result in a total of at least 200 plants divided between two or more replicates. In the case of vegetatively propagated varieties, each test should be designed to result in a total of at least 60 plants.

3.4.2 The design of the tests should be such that plants or parts of plants may be removed for measurement or counting without prejudice to the observations which must be made up to the end of the growing cycle.

3.5 *Number of Plants / Parts of Plants to be Examined*

3.5.1 Seed-propagated varieties: unless otherwise indicated, all observations on single plants should be made on 60 plants or parts taken from each of 60 plants and any other observations made on all plants in the test.

3.5.2 Vegetatively propagated varieties: unless otherwise indicated, all observations on single plants should be made on 20 plants or parts taken from each of 20 plants and any other observations made on all plants in the test.

3.6 *Additional Tests*

Additional tests, for examining relevant characteristics, may be established.

4. Assessment of Distinctness, Uniformity and Stability

4.1 *Distinctness*

4.1.1 General Recommendations

It is of particular importance for users of these Test Guidelines to consult the General Introduction prior to making decisions regarding distinctness. However, the following points are provided for elaboration or emphasis in these Test Guidelines.

4.1.2 Consistent Differences

The differences observed between varieties may be so clear that more than one growing cycle is not necessary. In addition, in some circumstances, the influence of the environment is not such that more than a single growing cycle is required to provide assurance that the differences observed between varieties are sufficiently consistent. One means of ensuring that a difference in a characteristic, observed in a growing trial, is sufficiently consistent is to examine the characteristic in at least two independent growing cycles.

4.1.3 Clear Differences

Determining whether a difference between two varieties is clear depends on many factors, and should consider, in particular, the type of expression of the characteristic being examined, i.e. whether it is expressed in a qualitative, quantitative, or pseudo-qualitative manner. Therefore, it is important that users of these Test Guidelines are familiar with the recommendations contained in the General Introduction prior to making decisions regarding distinctness.

4.2 *Uniformity*

4.2.1 It is of particular importance for users of these Test Guidelines to consult the General Introduction prior to making decisions regarding uniformity. However, the following points are provided for elaboration or emphasis in these Test Guidelines:

4.2.2 The assessment of uniformity for cross-pollinated varieties should be according to the recommendations for cross-pollinated varieties in the General Introduction.

4.2.3 For the assessment of uniformity of single cross hybrids, a population standard of 2% and an acceptance probability of at least 95% should be applied. In the case of a sample size of 200 plants, 7 off-types are allowed.

4.2.4 For the assessment of vegetatively propagated varieties, a population standard of 1% and an acceptance probability of at least 95% should be applied. In the case of a sample size of 60 plants, 2 off-types are allowed.

4.3 *Stability*

4.3.1 In practice, it is not usual to perform tests of stability that produce results as certain as those of the testing of distinctness and uniformity. However, experience has demonstrated that, for many types of variety, when a variety has been shown to be uniform, it can also be considered to be stable.

4.3.2 Where appropriate, or in cases of doubt, stability may be tested, either by growing a further generation, or by testing a new seed or plant stock to ensure that it exhibits the same characteristics as those shown by the previous material supplied.

5. Grouping of Varieties and Organization of the Growing Trial

5.1 The selection of varieties of common knowledge to be grown in the trial with the candidate varieties and the way in which these varieties are divided into groups to facilitate the assessment of distinctness are aided by the use of grouping characteristics.

5.2 Grouping characteristics are those in which the documented states of expression, even where produced at different locations, can be used, either individually or in combination with other such characteristics: (a) to select varieties of common knowledge that can be excluded from the growing trial used for examination of distinctness; and (b) to organize the growing trial so that similar varieties are grouped together.

5.3 The following have been agreed as useful grouping characteristics:

- (a) Leaf blade: width (characteristic 5)
- (b) Leaf blade: color (characteristic 6)
- (c) Plant: length (characteristic 10)
- (d) Shaft: length (characteristic 11)
- (e) Flower: male sterility (characteristic 17)

5.4 Guidance for the use of grouping characteristics, in the process of examining distinctness, is provided through the General Introduction.

6. Introduction to the Table of Characteristics

6.1 *Categories of Characteristics*

6.1.1 Standard Test Guidelines Characteristics

Standard Test Guidelines characteristics are those which are approved by UPOV for examination of DUS and from which members of the Union can select those suitable for their particular circumstances.

6.1.2 Asterisked Characteristics

Asterisked characteristics (denoted by *) are those included in the Test Guidelines which are important for the international harmonization of variety descriptions and should always be examined for DUS and included in the variety description by all members of the Union, except when the state of expression of a preceding characteristic or regional environmental conditions render this inappropriate.

6.2 *States of Expression and Corresponding Notes*

States of expression are given for each characteristic to define the characteristic and to harmonize descriptions. Each state of expression is allocated a corresponding numerical note for ease of recording of data and for the production and exchange of the description.

6.3 *Types of Expression*

An explanation of the types of expression of characteristics (qualitative, quantitative and pseudo-qualitative) is provided in the General Introduction.

6.4 *Example Varieties*

Where appropriate, example varieties are provided to clarify the states of expression of each characteristic.

6.5 *Legend*

(*) Asterisked characteristic – see Chapter 6.1.2

QL: Qualitative characteristic – see Chapter 6.3

QN: Quantitative characteristic – see Chapter 6.3

PQ: Pseudo-qualitative characteristic – see Chapter 6.3

MG, MS, VG, VS: See Chapter 3.3.2

(a)-(d) See Explanations on the Table of Characteristics in Chapter 8.1

(+) See Explanations on the Table of Characteristics in Chapter 8.2

7. Table of Characteristics/Tableau des caractères/Merkmalstabelle/Tabla de caracteres

	English	français	Deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota	
1.	VG/ MS	Plant: height	Plante : hauteur	Pflanze: Höhe	Planta: altura		
(+)							
QN	(a)	very short	très basse	sehr niedrig	muy baja	De Carentan 2	1
		short	basse	niedrig	baja	D'Hiver de Saint Victor	3
		medium	moyenne	mittel	media	Bleu de Solaise	5
		tall	haute	hoch	alta	Kingston, Long géant du Verdet	7
		very tall	très haute	sehr hoch	muy alta	Bulgaarse Reuzen	9
2.	VG	Foliage: attitude	Feuillage : port	Laub: Haltung	Follaje: porte		
(+)							
QN	(a)	erect	dressé	aufrecht	erecto	Rese	1
		semi-erect	demi-dressé	halbaufrecht	semierecto	Linx, Upton	3
		horizontal	horizontal	waagrecht	horizontal	De Carentan 2, D'Elbeuf, Jaune gros du Poitou	5
3.	VG	Leaf blade: bending	Limbe : fléchissement	Blattspreite: Biegung	Limbo: curvatura		
(+)							
QN	(b)	weak	faible	gering	débil	Bell, Lampton	3
		medium	moyen	mittel	media	Flextan, Linx	5
		strong	fort	stark	fuerte	Blauwgroene Winter, Bulgaarse Reuzen	7
4.	VG/ MS	Leaf blade: length	Limbe : longueur	Blattspreite: Länge	Limbo: longitud		
(+)							
QN	(b)	short	court	kurz	corto	Artemis, Conora, De Carentan 2, D'Elbeuf, Kalmar	3
		medium	moyen	mittel	medio	Flextan, Porridor, Rese	5
		long	long	lang	largo	Kingston, Kong Richard, Maxim	7

	English	français	Deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota	
5. (*) (+)	VG/ MS	Leaf blade: width	Limbe : largeur	Blattspreite: Breite	Limbo: anchura		
QN	(b)	narrow	étroit	schmal	estrecho	Lampton, Rustic	3
		medium	moyen	mittel	medio	De Liège	5
		broad	large	breit	ancho	Jaune gros du Poitou, Rese, Striker	7
6. (*)	VG	Leaf blade: color	Limbe : couleur	Blattspreite: Farbe	Limbo: color		
PQ	(b)	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	Blauwgroene Winter, Libertas, Olaf, Porridor	4
7.	VG	Leaf blade: intensity of color	Limbe : intensité de la couleur	Blattspreite: Intensität der Farbe	Limbo: intensidad del color		
QN	(b)	light	claire	hell	clara		3
		medium	moyenne	mittel	media		5
		dark	foncée	dunkel	oscura		7
8. (+)	VG	Leaf blade: anthocyanin coloration	Limbe : pigmentation anthocyanique	Blattspreite: Anthocyanfärbung	Limbo: coloración antociánica		
QN	(b)	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	
9.	VG	Leaf blade: waxiness	Limbe : glaucescence	Blattspreite: Bereifung	Limbo: cerosidad		
QN	(b)	absent or very weak	absente ou très faible	fehlend oder sehr gering	ausente o muy débil	Jaune gros du Poitou, Kingston	1
		weak	faible	gering	débil	Carlton, Gros long d'été 2, Rese	3
		medium	moyenne	mittel	media	D'Elbeuf, Linx	5
		strong	forte	stark	fuerte	Bleu de Solaise, Flextan	7
		very strong	très forte	sehr stark	muy fuerte		9
10.	VG/ (* (+)	Plant: length	Plante : longueur	Pflanze: Länge	Planta: longitud		
QN	(c)	very short	très courte	sehr kurz	muy corta		1
		short	courte	kurz	corta	De Carentan 2	3
		medium	moyenne	mittel	media	Bleu de Solaise, Jaune gros du Poitou	5
		long	longue	lang	larga	Kingston, Rese, Titan	7
		very long	très longue	sehr lang	muy larga	Bulgaarse Reuzen	9
11.	VG/ (* (+)	Shaft: length	Fût : longueur	Schaft: Länge	Fuste: longitud		
QN	(c)	very short	très courte	sehr kurz	muy corto		1
		short	courte	kurz	corto	Artemis, Bleu de Solaise, D'Hiver de Saint Victor	3
		medium	moyenne	mittel	medio	Gros long d'été 2	5
		long	longue	lang	largo	Lampton, Maxim	7
		very long	très longue	sehr lang	muy largo	Kingston Kong, Richard	9

	English	français	Deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
12.	VG/ MS	Shaft: diameter	Fût : diamètre	Schaft: Durchmesser	Fuste: diámetro	
(*) (+)						
QN	(c)	very small	très petit	sehr klein	muy pequeño	1
		small	petit	klein	pequeño	Lampton, Titan 3
		medium	moyen	mittel	medio	Géant précoce 5
		large	grand	groß	grande	Premier, Zwitserse Reuzen 7
		very large	très grand	sehr groß	muy grande	Jaune gros du Poitou 9
13.	VG	Shaft: ratio length/ diameter	Fût : rapport longueur/diamètre	Schaft: Verhältnis Länge/Durchmesser	Fuste: relación longitud / diámetro	
(+)						
QN	(c)	small	petit	klein	pequeño	D'Hiver de Saint Victor 3
		medium	moyen	mittel	medio	Easton, Gros long d'été 2 5
		large	grand	groß	grande	Bulgaarse Reuzen 7
14.	VG	Shaft: bulb formation	Fût : tendance à former un bulbe	Schaft: Zwiebelbildung	Fuste: tendencia a formar un bulbo	
(*)						
QN	(c)	absent or very weak	nulle ou très faible	fehlend oder sehr gering	ausente o muy baja	Jolant, Roxton, Striker 1
		weak	faible	gering	baja	Hafnia, Lampton, Linx, Titan 3
		medium	moyenne	mittel	media	Bleu de Solaise, Premier 5
		strong	forte	stark	fuerte	Artemis, Jaune gros du Poitou 7
		very strong	très forte	sehr stark	muy fuerte	Carentan 2 9
15.	VG	Shaft: narrowing towards base	Fût : rétrécissement vers la base	Schaft: Verjüngung zur Basis hin	Fuste: estrechamiento hacia la base	
(+)						
QL	(c)	absent	absent	fehlend	ausente	Herfstreuzen 2 1
		present	présent	vorhanden	presente	D'Elbeuf 9

	English	français	Deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
16.	VG	Spathe: length	Spathe : longueur	Blütenscheide: Länge	Escapo: longitud	
	(+)					
QN	(d)	short	courte	kurz	corto	3
		medium	moyenne	mittel	medio	5
		long	longue	lang	largo	7
17.	VG	Flower: male sterility	Fleur : stérilité mâle	Blüte: männliche Sterilität	Flor: esterilidad masculina	
	(*) (+)					
QL	(d)	absent	absente	fehlend	ausente	1
	(e)	present	présente	vorhanden	presente	9

8. Explanations on the Table of Characteristics

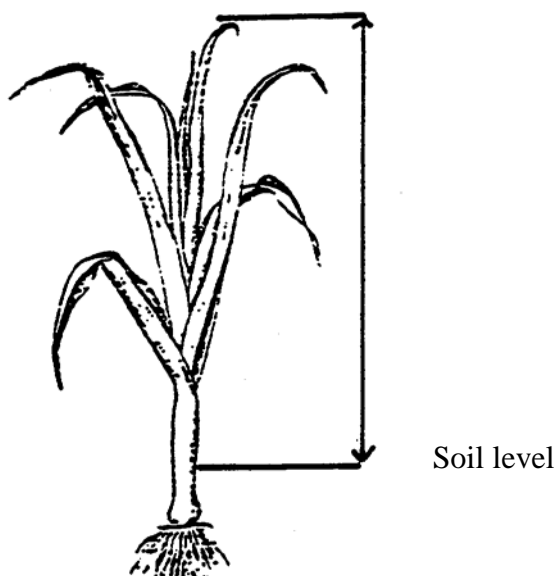
8.1 *Explanations covering several characteristics*

Characteristics containing the following key in the second column of the Table of Characteristics should be examined as indicated below:

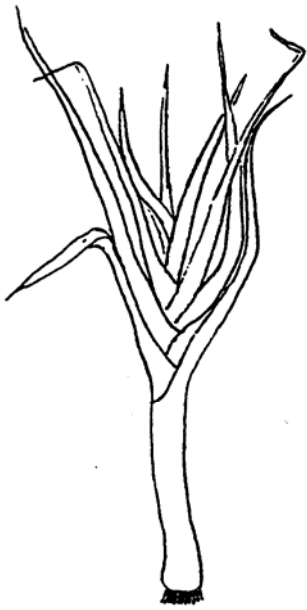
- (a) Observations should be made when the outer (oldest) leaf blades start to senesce.
- (b) Observations on the leaf blade should be made on the fully developed leaf.
- (c) Observations should be made at harvest maturity.
- (d) To be observed on plants produced by vegetative propagation.

8.2 *Explanations for individual characteristics*

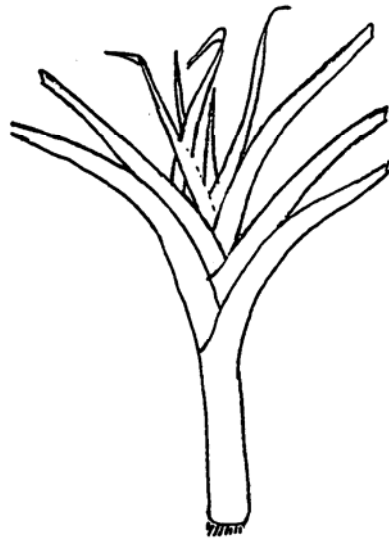
Ad. 1: Plant: height



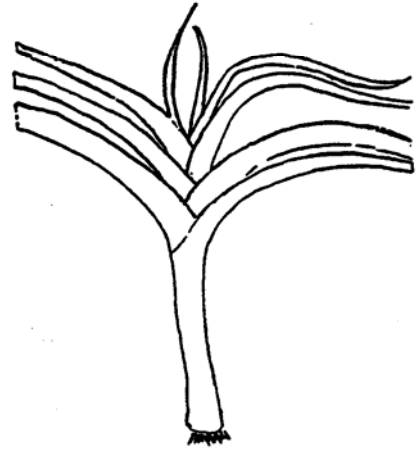
Ad. 2: Foliage: attitude



1
erect

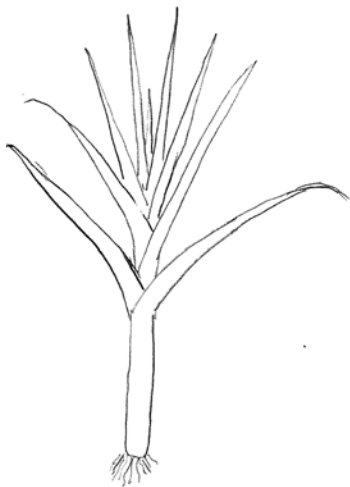


3
semi-erect



5
horizontal

Ad. 3: Leaf blade: bending



3
weak



5
medium

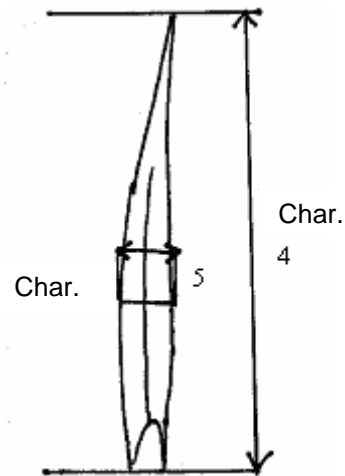


7
strong

Ad. 4: Leaf blade: length

Ad. 5: Leaf blade: width

Leaf blade length and width should be observed on the longest leaf blade.

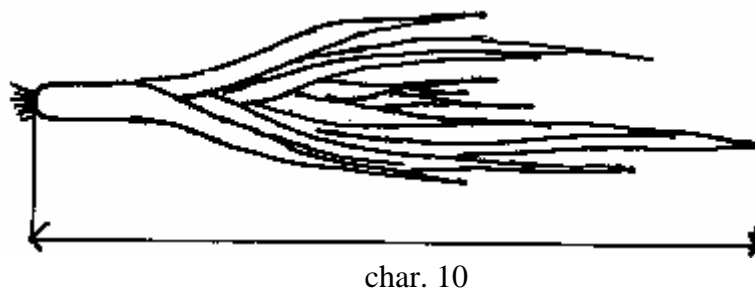


Ad. 8: Leaf blade: anthocyanin coloration

To be observed after a period of night frost.

Ad. 10: Plant: length

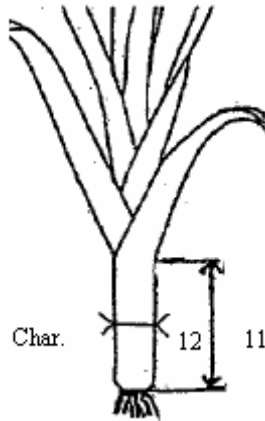
Plant length should be measured on the harvested plant with the longest leaves brought in line with the shaft.



Ad. 11: Shaft: length

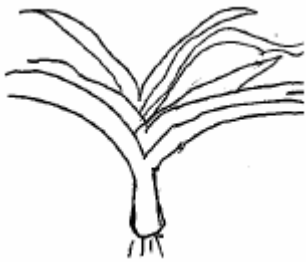
Ad. 12: Shaft: diameter

Ad. 13: Shaft: ratio length/diameter



The diameter of the shaft should be observed at the middle of the length.

Ad. 13: Shaft: ratio length/diameter



3
small

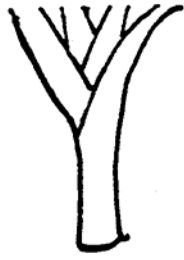


5
medium

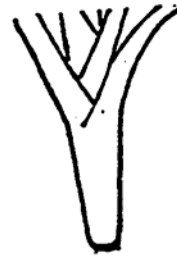


7
large

Ad. 15: Shaft: narrowing towards base



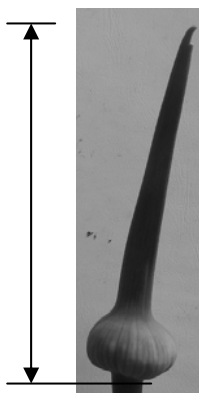
1
absent



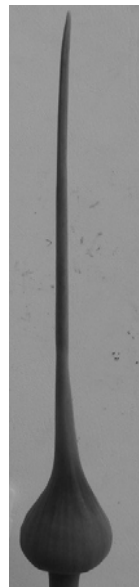
9
present

Ad. 16: Spathe: length

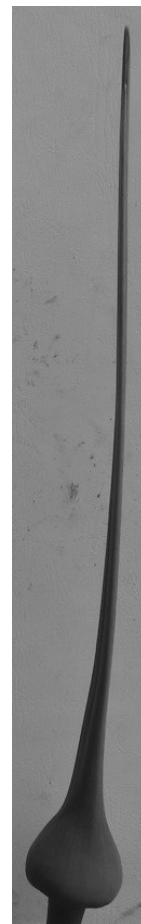
To be observed on the green, fully developed spathe, before it starts to open and desiccate.



3
short



5
medium



7
long

Ad. 17: Flower: male sterility

The observation of male sterility should be done at full flowering. Male sterility can be observed by rubbing a piece of black paper gently over the flower head: if the flowers are sterile, no pollen will be seen on the paper. In addition, in the case of male sterile varieties, the anthers are empty and desiccate very quickly.

9. Literature

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

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

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

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

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10. Technical Questionnaire

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
		Application date: (not to be filled in by the applicant)
TECHNICAL QUESTIONNAIRE to be completed in connection with an application for plant breeders' rights		
1. Subject of the Technical Questionnaire		
1.1 Botanical name	<input type="text" value="Allium porrum L."/>	
1.2 Common name	<input type="text" value="Leek"/>	
2. Applicant		
Name	<input type="text"/>	
Address	<input type="text"/>	
Telephone No.	<input type="text"/>	
Fax No.	<input type="text"/>	
E-mail address	<input type="text"/>	
Breeder (if different from applicant)	<input type="text"/>	
3. Proposed denomination and breeder's reference		
Proposed denomination (if available)	<input type="text"/>	
Breeder's reference	<input type="text"/>	

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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#4. Information on the breeding scheme and propagation of the variety

4.1 Breeding scheme

Variety resulting from:

4.1.1 Crossing

(a) controlled cross []
(please state parent varieties)

(b) partially known cross []
(please state known parent variety(ies))

(c) unknown cross []

4.1.2 Mutation []
(please state parent variety)

4.1.3 Discovery and development []
(please state where and when discovered
and how developed)

4.1.4 Other []
(please provide details)

Authorities may allow certain of this information to be provided in a confidential section of the Technical Questionnaire.

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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4.2 Method of propagating the variety

4.2.1 Seed-propagated varieties

- (a) Cross-pollination []
- (b) Hybrid
 - Seed-propagated parents []
 - One vegetatively propagated and one seed-propagated parent []
 - Two vegetatively propagated parents []
- (c) Other []
(please provide details)

4.2.2 Vegetatively propagated varieties

- (a) cuttings []
- (b) *in vitro* propagation []
- (c) other (state method) []

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5. Characteristics of the variety to be indicated (the number in brackets refers to the corresponding characteristic in Test Guidelines; please mark the note which best corresponds).

Characteristics	Example Varieties	Note
5.1 Leaf blade: width (5)		
narrow	Lampton, Rustic	3[]
medium	De Liège	5[]
broad	Jaune gros du Poitou, Rese, Striker	7[]
5.2 Leaf blade: color (6)		
yellow green	Jaune gros du Poitou	1[]
green	Premier	2[]
grey green	Zwitserse Reuzen	3[]
blue green	Blauwgroene Winter, Libertas, Olaf, Porridor	4[]
5.3 Plant: length (10)		
very short		1[]
short	De Carentan 2	3[]
medium	Bleu de Solaise, Jaune gros du Poitou	5[]
long	Kingston, Rese, Titan	7[]
very long	Bulgaarse Reuzen	9[]

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Characteristics	Example Varieties	Note	
5.4 Shaft: bulb formation (14)			
absent or very weak	Jolant, Roxton, Striker	1[]	
weak	Hafnia, Lampton, Linx, Titan	3[]	
medium	Bleu de Solaise, Premier	5[]	
strong	Artemis, Jaune gros du Poitou	7[]	
very strong	Carentan 2	9[]	
5.5 Flower: male sterility (for vegetatively propagated varieties only) (17)			
absent		1[]	
present		9[]	

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6. Similar varieties and differences from these varieties

Please use the following table and box for comments to provide information on how your candidate variety differs from the variety (or varieties) which, to the best of your knowledge, is (or are) most similar. This information may help the examination authority to conduct its examination of distinctness in a more efficient way.

Denomination(s) of variety(ies) similar to your candidate variety	Characteristic(s) in which your candidate variety differs from the similar variety(ies)	Describe the expression of the characteristic(s) for the similar variety(ies)	Describe the expression of the characteristic(s) for your candidate variety
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<i>Example</i>	<i>Plant: length</i>	<i>long</i>	<i>medium</i>
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Comments:

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#7. Additional information which may help in the examination of the variety

7.1 In addition to the information provided in sections 5 and 6, are there any additional characteristics which may help to distinguish the variety?

Yes [] No []

(If yes, please provide details)

7.2 Are there any special conditions for growing the variety or conducting the examination?

Yes [] No []

(If yes, please provide details)

7.3 Other information

7.3.1 Growing season

- | | |
|------------|-----|
| (a) spring | [] |
| (b) summer | [] |
| (c) autumn | [] |
| (d) winter | [] |

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 (b) is yes, please attach a copy of the authorization.

Authorities may allow certain of this information to be provided in a confidential section of the Technical Questionnaire.

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9. Information on plant material to be examined or submitted for examination.

9.1 The expression of a characteristic or several characteristics of a variety may be affected by factors, such as pests and disease, chemical treatment (e.g. growth retardants or pesticides), effects of tissue culture, different rootstocks, scions taken from different growth phases of a tree, etc.

9.2 The plant material should not have undergone any treatment which would affect the expression of the characteristics of the variety, unless the competent authorities allow or request such treatment. If the plant material has undergone such treatment, full details of the treatment must be given. In this respect, please indicate below, to the best of your knowledge, if the plant material to be examined has been subjected to:

- | | | |
|---|---------|--------|
| (a) Microorganisms (e.g. virus, bacteria, phytoplasma) | Yes [] | No [] |
| (b) Chemical treatment (e.g. growth retardant, pesticide) | Yes [] | No [] |
| (c) Tissue culture | Yes [] | No [] |
| (d) Other factors | Yes [] | No [] |

Please provide details for where you have indicated "yes".

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10. I hereby declare that, to the best of my knowledge, the information provided in this form is correct:

Applicant's name

Signature

Date

[End of document]