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**INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS**  
GENEVA

**DRAFT****LEEK**

UPOV Code: ALLIU\_POR

*Allium porrum* L.**GUIDELINES****FOR THE CONDUCT OF TESTS****FOR DISTINCTNESS, UNIFORMITY AND STABILITY***prepared by experts from the Netherlands*

*to be considered by the Enlarged Editorial Committee at its meeting  
to be held in Geneva, Switzerland, on January 8, 2008*

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](http://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, on single plants all observations 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) Plant: length (characteristic 2)
- (b) Leaf blade: width (characteristic 6)
- (c) Leaf blade: color (characteristic 7)
- (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/<br>Exemples/<br>Beispielssorten/<br>Variedades ejemplo | Note/<br>Nota |
|--------------------------|----------------------------|----------------------------|------------------------------|-------------------------|---------------------------------------------------------------------------|---------------|
| <b>1. VG/ MS (+)</b>     | <b>Plant: height</b>       | <b>Plante : hauteur</b>    | <b>Pflanze: Höhe</b>         | <b>Planta: altura</b>   |                                                                           |               |
| <b>QN (a)</b>            | 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,<br>Long géant du Verdet                                         | 7             |
|                          | very tall                  | très haute                 | sehr hoch                    | muy alta                | Bulgaarse Reuzen                                                          | 9             |
| <b>2. VG/ MS (*) (+)</b> | <b>Plant: length</b>       | <b>Plante : longueur</b>   | <b>Pflanze: Länge</b>        | <b>Planta: longitud</b> |                                                                           |               |
| <b>QN (a)</b>            | very short                 | très courte                | sehr kurz                    | muy corta               |                                                                           | 1             |
|                          | short                      | courte                     | kurz                         | corta                   | De Carentan 2                                                             | 3             |
|                          | medium                     | moyenne                    | mittel                       | media                   | Bleu de Solaise,<br>Jaune gros du Poitou                                  | 5             |
|                          | long                       | longue                     | lang                         | larga                   | Kingston, Rese, Titan                                                     | 7             |
|                          | very long                  | très longue                | sehr lang                    | muy larga               | Bulgaarse Reuzen                                                          | 9             |
| <b>3. VG (+)</b>         | <b>Foliage: attitude</b>   | <b>Feuillage : port</b>    | <b>Laub: Haltung</b>         | <b>Follaje: porte</b>   |                                                                           |               |
| <b>QN (a)</b>            | erect                      | dressé                     | aufrecht                     | erecto                  | Rese                                                                      | 1             |
|                          | semi-erect                 | demi-dressé                | halbaufrecht                 | semierecto              | Linx, Upton                                                               | 3             |
|                          | horizontal                 | horizontal                 | waagrecht                    | horizontal              | De Carentan 2,<br>D'Elbeuf,<br>Jaune gros du Poitou                       | 5             |
| <b>4. VG (+)</b>         | <b>Leaf blade: bending</b> | <b>Limbe : fléchissant</b> | <b>Blattspreite: Biegung</b> | <b>Limbo: curvatura</b> |                                                                           |               |
| <b>QN (b)</b>            | weak                       | faible                     | gering                       | ligera                  | Bell, Lampton                                                             | 3             |
|                          | medium                     | moyen                      | mittel                       | media                   | Flextan, Linx                                                             | 5             |
|                          | strong                     | fort                       | stark                        | fuerte                  | Blauwgroene Winter,<br>Bulgaarse Reuzen                                   | 7             |

|    |                         | English                           | français                           | Deutsch                               | español                        | Example Varieties/<br>Exemples/<br>Beispielssorten/<br>Variedades ejemplo | Note/<br>Nota |
|----|-------------------------|-----------------------------------|------------------------------------|---------------------------------------|--------------------------------|---------------------------------------------------------------------------|---------------|
| 5. | VG/<br>MS<br>(+)        | Leaf blade: length                | Limbe : longueur                   | Blattspreite: Länge                   | Limbo: longitud                |                                                                           |               |
| QN | (b)                     | short                             | court                              | kurz                                  | corto                          | Artemis, Conora,<br>De Carentan 2,<br>D'Elbeuf, Kalmar                    | 3             |
|    |                         | medium                            | moyen                              | mittel                                | medio                          | Flextan, Porridor, Rese                                                   | 5             |
|    |                         | long                              | long                               | lang                                  | largo                          | Kingston,<br>Kong Richard, Maxim                                          | 7             |
| 6. | VG/<br>MS<br>(*)<br>(+) | 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,<br>Rese, Striker                                    | 7             |
| 7. | VG<br>(*)               | 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                     | Zwitzerse Reuzen                                                          | 3             |
|    |                         | blue-green                        | vert-bleu                          | blaugrün                              | verde azul                     | Blauwgroene Winter,<br>Libertas, Olaf, Porridor                           | 4             |
| 8. | VG                      | Leaf blade: intensity<br>of color | Limbe : intensité de<br>la couleur | Blattspreite:<br>Intensität der Farbe | Limbo: intensidad<br>del color |                                                                           |               |
| QN | (b)                     | light                             | claire                             | hell                                  | clara                          |                                                                           | 3             |
|    |                         | medium                            | moyenne                            | mittel                                | media                          |                                                                           | 5             |
|    |                         | dark                              | foncée                             | dunkel                                | oscura                         |                                                                           | 7             |

|     |       | English                            | français                           | Deutsch                        | español                       | Example Varieties/<br>Exemples/<br>Beispielssorten/<br>Variedades ejemplo | Note/<br>Nota |
|-----|-------|------------------------------------|------------------------------------|--------------------------------|-------------------------------|---------------------------------------------------------------------------|---------------|
| 9.  | 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             |
| 10. | 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             |
| 11. | VG/MS | 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/<br>Exemples/<br>Beispielssorten/<br>Variedades ejemplo | Note/<br>Nota                   |
|-------------------|--------------|--------------------------------------|------------------------------------------|---------------------------------------------|---------------------------------------------------------------------------|---------------------------------|
| <b>12. (*)(+)</b> | <b>VG/MS</b> | <b>Shaft: diameter</b>               | <b>Fût : diamètre</b>                    | <b>Schaft: Durchmesser</b>                  | <b>Fuste: diámetro</b>                                                    |                                 |
| <b>QN</b>         | <b>(c)</b>   | 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          |
| <b>13. (+)</b>    | <b>VG</b>    | <b>Shaft: ratio length/diameter</b>  | <b>Fût : rapport longueur/diamètre</b>   | <b>Schaft: Verhältnis Länge/Durchmesser</b> | <b>Fuste: relación longitud / diámetro</b>                                |                                 |
| <b>QN</b>         | <b>(c)</b>   | 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              |
| <b>14. (*)</b>    | <b>VG</b>    | <b>Shaft: bulb formation</b>         | <b>Fût : tendance à former un bulbe</b>  | <b>Schaft: Zwiebelbildung</b>               | <b>Fuste: tendencia a formar un bulbo</b>                                 |                                 |
| <b>QN</b>         | <b>(c)</b>   | 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                    |
| <b>15. (+)</b>    | <b>VG</b>    | <b>Shaft: narrowing towards base</b> | <b>Fût : rétrécissement vers la base</b> | <b>Schaft: Verjüngung zur Basis hin</b>     | <b>Fuste: estrechamiento hacia la base</b>                                |                                 |
| <b>QL</b>         | <b>(c)</b>   | absent                               | absent                                   | fehlend                                     | ausente                                                                   | Herfstreuzen 2 1                |
|                   |              | present                              | présent                                  | vorhanden                                   | presente                                                                  | D'Elbeuf 9                      |

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

## 8. Explanations on the Table of Characteristics

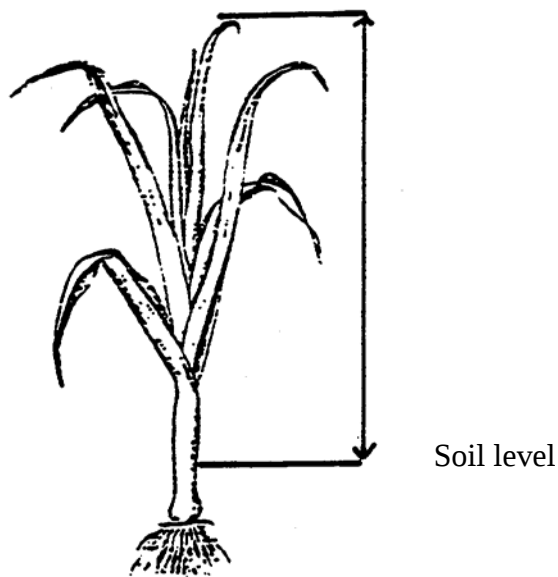
### 8.1 *Explanations covering several characteristics*

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

- (a) Plant: All observations should be made at harvest maturity. Harvest maturity is when the outer (oldest) leaf blades start to desiccate.
- (b) Leaf blade: All observations on leaf blade should be made on the fully developed leaf.
- (c) Shaft: All observations should be made at harvest maturity
- (d) To be observed on varieties produced by vegetative propagation.
- (e) Flower: All observations on the flower should be made at full flowering, because when the flower gets older, the color will faint.

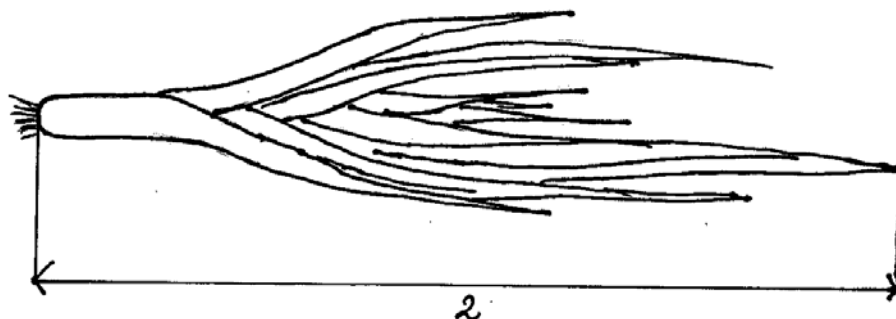
### 8.2 *Explanations for individual characteristics*

#### Ad. 1: Plant: height

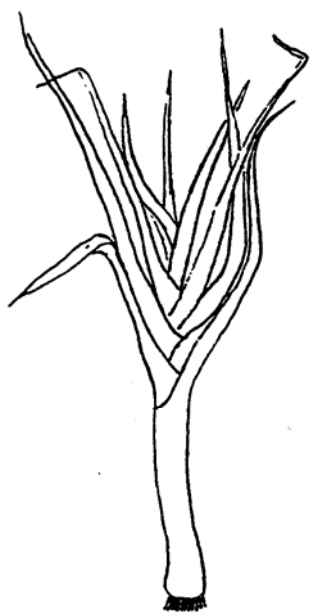


Ad. 2: Plant: length

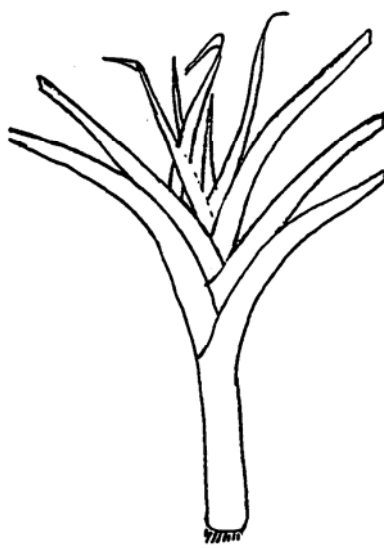
Plant length should be measured on the harvested plant with the longest leaves brought in line with the shaft.



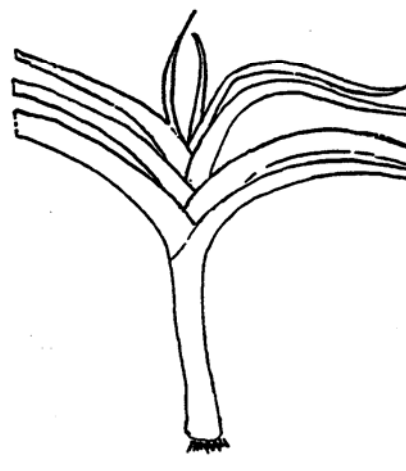
Ad. 3: Foliage: attitude



1  
erect

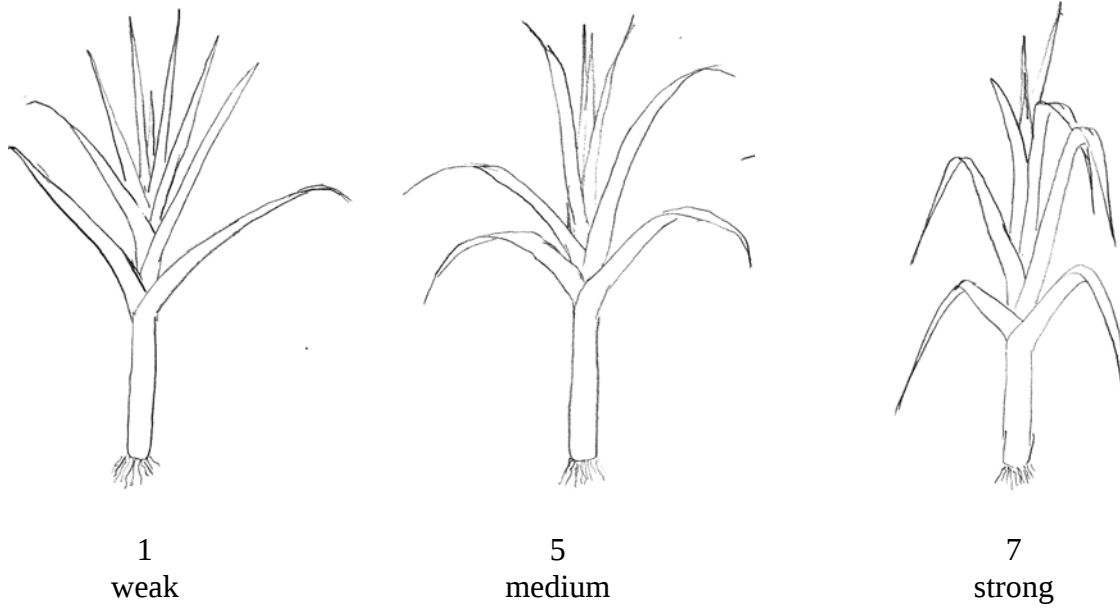


3  
semi-erect



5  
horizontal

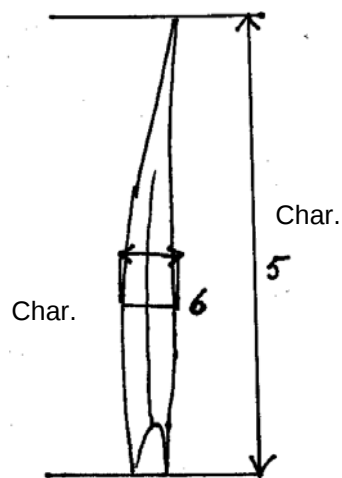
Ad. 4: Leaf blade: bending



Ad. 5: Leaf blade: length

Ad. 6: Leaf blade: width

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



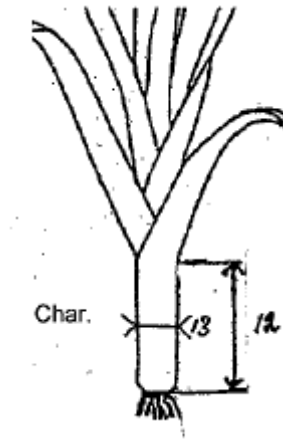
Ad. 9: Leaf blade: anthocyanin coloration

To be observed after a period of night frost.

Ad. 11: Shaft: length

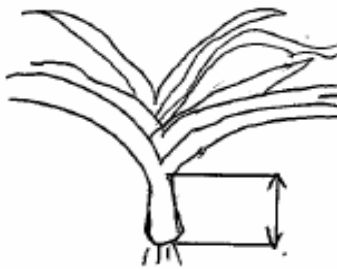
Ad. 12: Shaft: diameter

Ad. 13: Shaft: ratio length/diameter



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

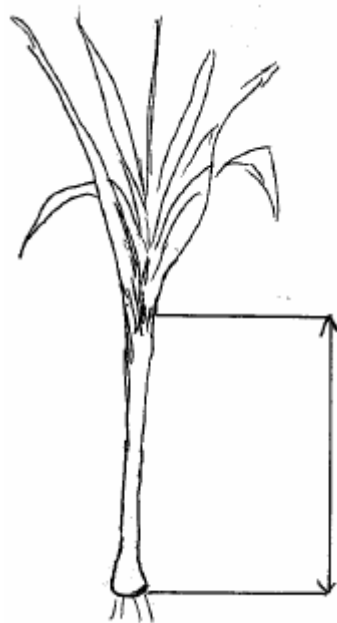
Ad. 13: Shaft: ratio length/diameter



3  
small

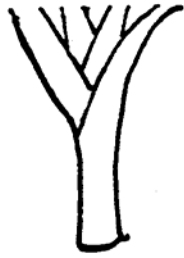


5  
medium

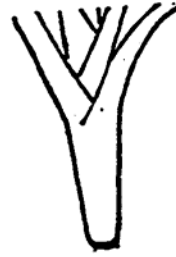


7  
large

Ad. 15: Shaft: narrowing towards base



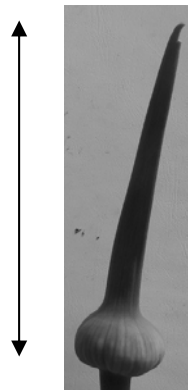
1  
absent



9  
present

Ad. 16: Spathe: length

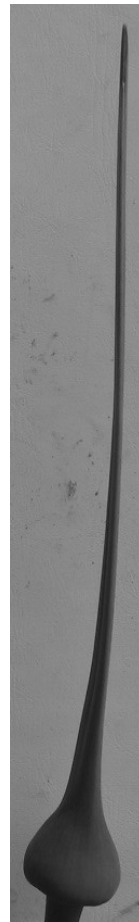
To be observed on the green, fully developed spathe, before it starts to open and desiccate.



3  
short



5  
medium



7  
long

## 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.

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, pp. 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, pp. 45-57.

10. Technical Questionnaire

|                                                                                                         |                                               |                                                             |
|---------------------------------------------------------------------------------------------------------|-----------------------------------------------|-------------------------------------------------------------|
| TECHNICAL QUESTIONNAIRE                                                                                 | Page {x} of {y}                               | Reference Number:                                           |
|                                                                                                         |                                               | Application date:<br>(not to be filled in by the applicant) |
| TECHNICAL QUESTIONNAIRE<br>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<br>(if available)                                                                 | <input type="text"/>                          |                                                             |
| Breeder's reference                                                                                     | <input type="text"/>                          |                                                             |

|                         |                 |                   |
|-------------------------|-----------------|-------------------|
| TECHNICAL QUESTIONNAIRE | Page {x} of {y} | Reference Number: |
|-------------------------|-----------------|-------------------|

#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<br>(please state parent varieties)               | [ ] |
| (b) partially known cross<br>(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)

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# 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: |
|-------------------------|-----------------|-------------------|

4.2 Method of propagating the variety

4.2.1 Seed-propagated varieties

|                             |     |
|-----------------------------|-----|
| (a) Cross-pollination       | [ ] |
| (b) Hybrid                  | [ ] |
| based on one clonal parent  | [ ] |
| based on two clonal parents | [ ] |
| (c) Parent line             | [ ] |
| (d) Other                   | [ ] |
| (please provide details)    |     |

4.2.2 Vegetatively propagated varieties

|                                 |     |
|---------------------------------|-----|
| (a) cuttings                    | [ ] |
| (b) <i>in vitro</i> propagation | [ ] |
| (c) other (state method)        | [ ] |

| TECHNICAL QUESTIONNAIRE                                                                                                                                                                       | Page {x} of {y}                                 | Reference Number: |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|-------------------|
| <p>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).</p> |                                                 |                   |
| Characteristics                                                                                                                                                                               | Example Varieties                               | Note              |
| <b>5.1 Plant: length</b><br><b>(2)</b>                                                                                                                                                        |                                                 |                   |
| very short                                                                                                                                                                                    |                                                 | 1[ ]              |
| short                                                                                                                                                                                         | De Carentan 2                                   | 3[ ]              |
| medium                                                                                                                                                                                        | Bleu de Solaise,<br>Jaune gros du Poitou        | 5[ ]              |
| long                                                                                                                                                                                          | Kingston, Rese, Titan                           | 7[ ]              |
| very long                                                                                                                                                                                     | Bulgaarse Reuzen                                | 9[ ]              |
| <b>5.2 Leaf blade: width</b><br><b>(6)</b>                                                                                                                                                    |                                                 |                   |
| narrow                                                                                                                                                                                        | Lampton, Rustic                                 | 3[ ]              |
| medium                                                                                                                                                                                        | De Liège                                        | 5[ ]              |
| broad                                                                                                                                                                                         | Jaune gros du Poitou,<br>Rese, Striker          | 7[ ]              |
| <b>5.3 Leaf blade: color</b><br><b>(7)</b>                                                                                                                                                    |                                                 |                   |
| yellow-green                                                                                                                                                                                  | Jaune gros du Poitou                            | 1[ ]              |
| green                                                                                                                                                                                         | Premier                                         | 2[ ]              |
| grey-green                                                                                                                                                                                    | Zwitserse Reuzen                                | 3[ ]              |
| blue-green                                                                                                                                                                                    | Blauwgroene Winter,<br>Libertas, Olaf, Porridor | 4[ ]              |

| TECHNICAL QUESTIONNAIRE                         |                                                         | Page {x} of {y} | Reference Number: |
|-------------------------------------------------|---------------------------------------------------------|-----------------|-------------------|
| Characteristics                                 | Example Varieties                                       | Note            |                   |
| <b>5.4 Shaft: length</b><br><b>(12)</b>         |                                                         |                 |                   |
| very short                                      |                                                         | 1[ ]            |                   |
| short                                           | Artemis,<br>Bleu de Solaise,<br>D'Hiver de Saint Victor | 3[ ]            |                   |
| medium                                          | Gros long d'été 2                                       | 5[ ]            |                   |
| long                                            | Lampton, Maxim                                          | 7[ ]            |                   |
| very long                                       | Kingston,<br>Kong Richard                               | 9[ ]            |                   |
| <b>5.5 Shaft: bulb formation</b><br><b>(15)</b> |                                                         |                 |                   |
| absent or very weak                             | Jolant, Roxton, Striker                                 | 1[ ]            |                   |
| weak                                            | Hafnia, Lampton, Linx,<br>Titan                         | 3[ ]            |                   |
| medium                                          | Bleu de Solaise, Premier                                | 5[ ]            |                   |
| strong                                          | Artemis,<br>Jaune gros du Poitou                        | 7[ ]            |                   |
| very strong                                     | Carentan 2                                              | 9[ ]            |                   |

|                         |                 |                   |
|-------------------------|-----------------|-------------------|
| TECHNICAL QUESTIONNAIRE | Page {x} of {y} | Reference Number: |
|-------------------------|-----------------|-------------------|

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 <b>similar</b> variety(ies) | Describe the expression of the characteristic(s) for <b>your</b> candidate variety |
|-------------------------------------------------------------------|-----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| <i>Example</i>                                                    | <i>Plant: length</i>                                                                    | <i>long</i>                                                                          | <i>medium</i>                                                                      |
|                                                                   |                                                                                         |                                                                                      |                                                                                    |
|                                                                   |                                                                                         |                                                                                      |                                                                                    |
|                                                                   |                                                                                         |                                                                                      |                                                                                    |
| Comments:                                                         |                                                                                         |                                                                                      |                                                                                    |

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.

|                         |                 |                   |
|-------------------------|-----------------|-------------------|
| TECHNICAL QUESTIONNAIRE | Page {x} of {y} | Reference Number: |
|-------------------------|-----------------|-------------------|

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 [ <input type="checkbox"/> ] | No [ <input type="checkbox"/> ] |
| (b) Chemical treatment (e.g. growth retardant, pesticide) | Yes [ <input type="checkbox"/> ] | No [ <input type="checkbox"/> ] |
| (c) Tissue culture                                        | Yes [ <input type="checkbox"/> ] | No [ <input type="checkbox"/> ] |
| (d) Other factors                                         | Yes [ <input type="checkbox"/> ] | No [ <input type="checkbox"/> ] |

Please provide details for where you have indicated “yes”.  
.....

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]