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TG/31/8

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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

UNION INTERNATIONALE POUR LA PROTECTION DES OBTENTIONS VÉGÉTALES

INTERNATIONALER VERBAND ZUM SCHUTZ VON PFLANZEN-ZÜCHTUNGEN

UNIÓN INTERNACIONAL PARA LA PROTECCIÓN DE LAS OBTENCIONES VEGETALES

GUIDELINES

FOR THE CONDUCT OF TESTS

FOR DISTINCTNESS, UNIFORMITY AND STABILITY

COCKSFOOT

(*Dactylis glomerata* L.)

GENEVA
2002

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COCKSFOOT

(*Dactylis glomerata* 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 Cocksfoot (*Dactylis glomerata* L.)

II. Material Required

1. The competent authorities decide when, where and in what quantity and quality the 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 to be supplied by the applicant:

1 kg.

The seed should meet the minimum requirements for germination, species and analytical purity, health and moisture content, specified by the competent authority. In cases where the seed is to be stored, the germination capacity should be as high as possible and should be stated by the applicant.

2. The seed 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 independent growing cycles.

2. The tests should normally be conducted at one place. If any important characteristics of the variety cannot be seen at that place, the variety may be tested at an additional place.

3. The tests should be carried out under conditions ensuring satisfactory growth for the expression of the relevant characteristics of the variety and for the conduct of the examination. The size of the plots should be such that plants or parts of plants may be removed for measuring and counting without prejudice to the observations which must be made up to the end of the growing period. Each test should be designed to result in a total of at least 60 spaced plants and 10 meters of row plot. Separate plots for observation and for measuring can only be used if they have been subject to similar environmental conditions.

4. Plots with spaced plants. Each test should consist of 60 single spaced plants arranged in 3 or more replicates .

5. Row plots. Each test should consist of at least 10 meters of row arranged in 2 or 3 replicates. The density of sowing should be such that about 160 to 200 plants per meter can be expected.

6. Additional tests for special purposes may be established.

IV. Methods and Observations

1. Unless otherwise stated, all observations on spaced plants should be made on on 60 plants or parts taken from each of 60 plants.

2. Observations on rows should be made on each row as a whole.

3. Where observations can be made in both spaced plants and row plots, it is likely that the expression of the characteristic and its method of recording are different because in single spaced plants the plants can be examined as discrete units.

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

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) Ploidy (characteristic 1)
(b) Plant: time of inflorescence emergence (after vernalization) (characteristic 5)
(c) Stem: length of longest stem including inflorescence (when fully expanded) (characteristic 7)

VI. Characteristics and Symbols

1. To assess distinctness, uniformity and stability, the characteristics and their states as given in the Table of Characteristics should be used.

2. Notes (numbers), for the purposes of electronic data processing, are given opposite the states of expression for each characteristic.

3. Legend:

(*) Characteristics that should be used on all varieties in every growing period over which the examinations are made and always be included in the variety description 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.

1) Type of assessment:

MG: 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

To be observed on A = spaced plants
B = row plots
C = special tests

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

	Plot[1)] Parcelle[1)] Parzelle[1)] Parcela[1)]	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
1.	**C**	**Ploidy**	**Ploïdie**	**Ploidie**	**Ploidía**		
		diploid	diploïde	diploid	diploide	Konrad	2
		tetraploid	tétraploïde	tetraploid	tetraploide	Athos	4
2.	**B VG**	**Foliage: fineness (at vegetative growth stage without vernalization)**	**Feuillage: finesse (au stade de la croissance végétative sans vernalisation)**	**Laub: Feinheit (im vegetativen Wachstum ohne Vernalisation)**	**Follaje: finura (en estado de crecimiento vegetativo sin vernalización)**		
		fine	fin	fein	fino	Medly	3
		medium	moyen	mittel	medio	Athos	5
		coarse	grossier	grob	grueso	Saborto	7
3. **(+)**	**A MS** **B VG**	**Plant: tendency to form inflorescences (without vernalization)**	**Plante: tendance à former des inflorescences (sans vernalisation)**	**Pflanze: Neigung zur Bildung von Blütenständen (ohne Vernalisation)**	**Planta: tendencia a formar inflorescencias (sin vernalización)**		
		absent or very weak	nulle ou très faible	fehlend oder sehr gering	ausente o muy débil		1
		weak	faible	gering	débil	Kid, Oberweihst	3
		medium	moyenne	mittel	media	Porthos	5
		strong	forte	stark	fuerte		7
		very strong	très forte	sehr stark	muy fuerte		9
4.	**B VG**	**Leaf: intensity of green color (after vernalization)**	**Feuille: intensité de la couleur verte (après vernalisation)**	**Blatt: Intensität der Grünfärbung (nach Vernalisation)**	**Hoja: intensidad del color verde (tras la vernalización)**		
		light	claire	hell	claro	Mobite	3
		medium	moyenne	mittel	medio	Athos	5
		dark	foncée	dunkel	oscuro	Lupré	7

	Plot[1)] Parcelle[1)] Parzelle[1)] Parcela[1)]	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
5. **(*)** **(+)**	**A** **B** **MS** **MG**	**Plant: time of inflorescence emergence (after vernalization)**	**Plante: époque d'épiaison (après vernalisation)**	**Pflanze: Zeitpunkt des Erscheinens der Blütenstände (nach Vernalisation)**	**Planta: época de emergencia de las inflorescencias (tras la vernalización)**		
		very early	très précoce	sehr früh	muy temprana		1
		early	précoce	früh	temprana	Floréal, Trérano	3
		medium	moyenne	mittel	media	Lude	5
		late	tardive	spät	tardía	Athos, Baraula	7
		very late	très tardive	sehr spät	muy tardía	Mobite	9
6. **(+)**	**A** **VS**	**Plant: growth habit at inflorescence emergence**	**Plante: port à l'épiaison**	**Pflanze: Wuchsform bei Erscheinen der Blütenstände**	**Planta: porte a la emergencia de la inflorescencia**		
		upright	dressé	aufrecht	erecto	Porthos	1
		semi-upright	demi- dressé	halbaufrecht	semi-erecto	Abar, Medly	3
		intermediate	demi- dressé à demi- étalé	mittel	intermedio	Cambria	5
		semi-prostrate	demi- étalé	halbliegend	semi-postrado		7
		prostrate	étalé	liegend	postrado		9
7. **(*)**	**A** **MS**	**Stem: length of longest stem including inflorescence (when fully expanded)**	**Tige: longueur de la tige la plus longue, y compris l'inflorescence (à la fin de l'élongation)**	**Halm: Länge des längsten Halms einschließlich Blütenstand (wenn voll ausgebildet)**	**Tallo: longitud del tallo más largo incluyendo la inflorescencia (cuando está completamente expandida)**		
		short	courte	kurz	corto	Lucifer	3
		medium	moyenne	mittel	medio	Athos	5
		long	longue	lang	largo	Lude	7

	Plot[1)] Parcelle[1)] Parzelle[1)] Parcela[1)]		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
8. **(+)**	**A**	**MS**	**Stem: length of upper internode (as for 7)**	**Tige: longueur du dernier entrenœud (comme pour 7)**	**Halm: Länge des obersten Internodiums (wie unter 7)**	**Tallo: longitud del entrenudo superior (como para 7)**		
			short	court	kurz	corto	Porthos	3
			medium	moyen	mittel	medio	Athos	5
			long	long	lang	largo	Lude	7
9.	**A**	**MS**	**Inflorescence: length (as for 7)**	**Inflorescence: longueur (comme pour 7)**	**Blütenstand: Länge (wie unter 7)**	**Inflorescencia: longitud (como para 7)**		
			short	courte	kurz	corta	Athos	3
			medium	moyenne	mittel	media	Lude	5
			long	longue	lang	larga	Porthos	7
10. **(*)**	**A**	**MS**	**Flag leaf: length (as for 7)**	**Dernière feuille: longueur (comme pour 7)**	**Fahnenblatt: Länge (wie unter 7)**	**Hoja banderola: longitud (como para 7)**		
			short	courte	kurz	corta	Lucifer	3
			medium	moyenne	mittel	media	Saborto	5
			long	longue	lang	larga	Porthos	7
11. **(*)**	**A**	**MS**	**Flag leaf: width (same flag leaf as that used for 10)**	**Dernière feuille: largeur (même feuille que celle utilisée pour 10)**	**Fahnenblatt: Breite (dasselbe Fahnenblatt wie unter 10)**	**Hoja banderola: anchura (la misma hoja que como para 10)**		
			narrow	étroite	schmal	estrecha		3
			medium	moyenne	mittel	media	Athos, Baraula	5
			wide	large	breit	ancha	Saborto	7

VIII. Explanations on the Table of Characteristics

Ad. 3: Plant: tendency to form inflorescences (without vernalization)

The number of plants showing at least three inflorescences should be recorded for each variety. To be assessed on one occasion on the whole trial when the varieties are judged to have reached their full expression of this characteristic.

Ad. 5: Plant: time of inflorescence emergence (after vernalization)

A. Plots with spaced plants

The date of inflorescence emergence of each single plant should be assessed. A single plant is considered to have headed when the tip of three inflorescences can be seen protruding from the flag leaf sheath. From the single plant data a mean date per plot and a mean date per variety is obtained.

B. Row plots

At each observation date the average plot stage should be expressed in one of the following growth stages:

1) Boot swollen

2) Tip of inflorescence just visible

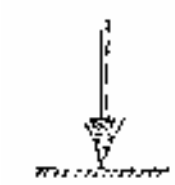
3) 1/4 of inflorescence emerged

4) 1/2 of inflorescence emerged.

The date of inflorescence emergence is the date at which the average plot stage 2 has been reached. This date should, if necessary, be obtained by interpolation.

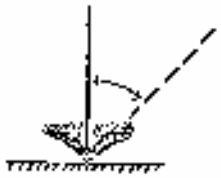
Ad. 6: Plant: growth habit at inflorescence emergence

The growth habit should be assessed visually from the attitude of the leaves of the plant as a whole. The angle formed by the imaginary line through the region of greatest leaf density and the vertical should be used.



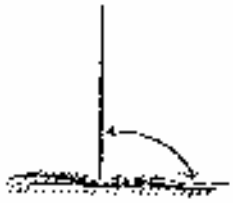
1
upright

3
semi-upright



5
intermediate

7
semi-prostrate



9
prostrate

Ad. 8: Stem: length of upper internode (as for 7)

The length should be measured when the internode is fully expanded. The longest upper internode of each plant should be measured as the distance between the upper node and the base of the inflorescence.

IX. Literature

(no specific literature)

X. Technical Questionnaire

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

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

1. Species	*Dactylis glomerata* L. COCKSFOOT
2. Applicant (Name and address)	
3. Proposed denomination or breeder's reference	

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

4.1 Origin

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 (1)	**Ploidy**		
	diploid	Konrad	2[ ]
	tetraploid	Athos	4[ ]
5.2 (5)	**Plant: time of inflorescence emergence (after vernalization)**		
	very early		1[ ]
	early	Floréal, Trérano	3[ ]
	medium	Lude	5[ ]
	late	Athos, Baraula	7[ ]
	very late	Mobite	9[ ]
5.3 (7)	**Stem: length of longest stem including inflorescence (when fully expanded)**		
	short	Lucifer	3[ ]
	medium	Athos	5[ ]
	long	Lude	7[ ]

6. Similar varieties and differences from these varieties

Denomination of similar variety	Characteristic in which the similar variety is different [o)]	State of expression of similar variety	State of expression of candidate variety

[o)] In the case of identical states of expressions of both varieties, please indicate the size of the difference.

7. Additional information which may help to distinguish the variety

7.1 Resistance to pests and diseases

7.2 Special conditions for the examination of the variety

7.3 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.

[End of document]