

UPOV

TG/UROCH(proj.3)

ORIGINAL: English

DATE: 2009-07-24

## INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

GENEVA

DRAFT

## UROCHLOA \*

UPOV Codes: UROCH\_BRI; UROCH\_DEC;  
UROCH\_DIC; UROCH\_HUM; UROCH\_RUZ  
*Urochloa brizantha* (Hochst. ex A. Rich.) Stapf.,  
*Urochloa decumbens* Stapf. R. Webster,  
*Urochloa dictyoneura* (Fig. & De Not.) Veldkamp P.,  
*Urochloa humidicola* (Rendle) Morrone & Zuloaga.,  
*Urochloa ruziziensis* R. Germ. & Evrard.  
and their hybrids

## GUIDELINES

## FOR THE CONDUCT OF TESTS

## FOR DISTINCTNESS, UNIFORMITY AND STABILITY

*prepared by an expert from Brazil*

*to be considered by the  
Technical Working Party for Agricultural Crops at its thirty-eighth session,  
to be held in Seoul, Republic of Korea, from August 31 to September 4, 2009*

Alternative Names:\*

Botanical name	English	French	German	Spanish
<i>Urochloa brizantha</i> (Hochst. ex A. Rich.) R. D. Webster, <i>Brachiaria brizantha</i> (Hochst. ex A. Rich.) Stapf)	Bread Grass, Palisade grass, Palisade grass, Palisade signal grass, Signal Grass	Signal	Palisadengras s	Pasto alambre, Pasto señal, Zacate señal, Zacate signal
<i>Urochloa decumbens</i> (Stapf) R. D. Webster, <i>Brachiaria decumbens</i> Stapf	Basilisk signal grass, Signal grass, Spreading liverseed grass, Surinam grass		Surinamgras	Zacate Surinam, Pasto chontalpo, Pasto de la palizada, Pasto de las orillas, Pasto peludo, Pasto prodigio, Zacate prodigio
<i>Urochloa dictyoneura</i> (Fig. & De Not.) Veldkamp P., <i>Brachiaria dictyoneura</i> (Fig. & De Not.) Veldkamp P.	Koronivia grass			
<i>Urochloa humidicola</i> (Rendle) Morrone & Zuloaga, <i>Brachiaria humidicola</i> (Rendle) Schweick.	Creeping signal grass, Koronivia grass	Koronivia		Braquiaria dulce, Kikuyu de la Amazonía, Pasto humidícola, Pasto humidícola dulce
<i>Urochloa ruziziensis</i> (R. Germ. & C. M. Evrard) Morrone & Zuloaga, <i>Brachiaria ruziziensis</i> R. Germ. & C. M. Evrard	Congo grass, Congo signal grass, Ruzi grass			Congo señal, Gambutera, Kenia, Pasto Congo, Pasto ruzi

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 *Urochloa brizantha* (Hochst. ex A. Rich.) Stapf., *Urochloa decumbens* Stapf., *Urochloa dictyoneura* (Fig. & De Not.) Veldkamp P., *Urochloa humidicola* (Rendle) Morrone & Zuloaga and *Urochloa ruziziensis* R. Germ. & Evrard and their hybrids

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 or plants.

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

200 g of seed, for seed-propagated varieties  
or  
60 plants, in the case of vegetatively propagated varieties.

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. 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.

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

2.5 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*

The minimum duration of tests should normally be two independent growing cycles.

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.

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
- C: special test

### 3.4 *Test Design*

3.4.1 Each test should be designed to result in a total of at least 60 spaced plants at 1,5 m. by 1,5 m. and 10 meters of row plot.

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 In the case of seed-propagated varieties, unless otherwise indicated, all observations on single plants should be made on 30 plants or parts taken from each of 30 plants.

3.5.2 In the case of vegetatively propagated varieties, unless otherwise indicated, all observations on single plants should be made on 10 plants or parts taken from each of 10 plants.

### 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 seed-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 30 plants, 2 off-types are allowed.

4.2.4 For the assessment of uniformity of vegetatively propagated varieties no 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.

4.3.3 Where appropriate, or in cases of doubt, the stability of a hybrid variety may, in addition to an examination of the hybrid variety itself, also be assessed by examination of the uniformity and stability of its parent lines.

## 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: ploidy (characteristic 1)
- (b) Inflorescence: stigma color at anthesis (characteristic 23)
- (c) Spikelet: insertion on rachis (characteristic 24)

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*

(\*) Asterisk 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 3.3.3

(a)-(b) 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
<b>1.</b>	<b>C</b>					
(*)	<b>Plant: ploidy</b>					
(+)					Example varieties tests are in process. Information to be added.	
<b>QL</b>	diploid					2
	triploid					3
	tetraploid					4
	pentaploid					5
	hexaploid					6
	heptaploid					7
<b>2.</b>	<b>VG/</b>					
(*)	<b>Plant: growth habit</b>					
(+)	<b>MS</b>				Example varieties tests are in process. Information to be added.	
<b>QN</b>	(a) upright					3
	semi upright					5
	spreading					7
<b>3.</b>	<b>VG/</b>					
(+)	<b>Plant: height</b>					
<b>QN</b>	(a) short					3
	medium				MIXE LN 45, Mulato II, BRS Piatã	5
	tall					7
<b>4.</b>	<b>MS</b>					
	<b>Culm: number of basal tillers</b>					
<b>QN</b>	(a) few					3
	medium				BRS Piatã, MIXE LN 45	5
	many				Mulato II	7

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
<b>5.</b>	<b>MS</b>	<b>Culm: number of nodal tillers</b>				
(+)						
<b>QN</b>	<b>(a)</b>	few			BRS Piatã, Mulato II	3
	<b>(b)</b>	medium				5
		many				7
<b>6.</b>	<b>VS</b>	<b>Rhizome: development</b>				
(+)						
<b>QN</b>	<b>(a)</b>	absent or weak				1
	<b>(e)</b>	weak				3
		medium				5
		strong				7
<b>7.</b>	<b>VS</b>	<b>Rhizome: shape</b>				
(+)						
<b>PQ</b>	<b>(a)</b>	globose				1
	<b>(e)</b>	intermediate			BRS Piatã	2
		elongated			MIXE LN 45, Mulato II	3
<b>8.</b>	<b>VS</b>	<b>Stolon: development</b>				
(*)						
(+)						
<b>QN</b>	<b>(a)</b>	absent or weak				1
	<b>(e)</b>	weak				3
		medium				5
		strong				7
<b>9.</b>	<b>MS</b>	<b>Culm: length of internode</b>				
(+)						
<b>QN</b>	<b>(a)</b>	short				3
	<b>(b)</b>	medium			MIXE LN 45	5
		long				7



	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
<b>14. VG</b>	<b>Leaf: shape of blade</b>					
	(+)					
<b>PQ</b>	(a)	linear			BRS Piatã	1
	(b)	linear triangular			MIXE LN 45, Mulato II	2
		lanceolate				3
<b>15. MS</b>	<b>Leaf blade: length</b>				Example varieties tests are in process. Information to be added.	
<b>QN</b>	(a)	short				3
	(b)	medium			Mulato	5
		long			Toledo	7
<b>16. VG</b>	<b>Leaf blade: width</b>					
<b>QN</b>	(a)	narrow			BRS Piatã	3
	(b)	medium			MIXE LN 45	5
		broad			Mulato, Mulato II	7
<b>17. VG</b> (*)	<b>Leaf blade: density of hairs</b>					
<b>QN</b>	(a)	absent or very sparse			BRS Piatã	1
	(b)	sparse			MIXE LN 45	3
		medium				5
		dense			Mulato II	7
		very dense				9

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
<b>18.</b>	<b>VS</b>	<b>Leaf blade: distribution of hairs</b>				
	<b>(a)</b>	on upper side			MIXE LN 45	1
	<b>(b)</b>	on lower side				2
		on both sides			Mulato II	3
		on base				4
		on apex only				5
		on margins only				6
<b>19.</b>	<b>VS</b>	<b>Inflorescence: length of peduncule</b>				
	<b>QN</b>	short				3
		medium			Mulato II	5
		long			BRS Piatã, MIXE LN 45	7
<b>20.</b>	<b>MS</b>	<b>Inflorescence: length of main rachis</b>				
	<b>(+)</b>	short				3
	<b>QN</b>	medium			Mulato II	5
		long			BRS Piatã, MIXE LN 45	7
<b>21.</b>	<b>MS</b>	<b>Inflorescence: length of basal racemes</b>				
	<b>(+)</b>	short				3
	<b>QN</b>	medium			MIXE LN 45, Mulato II	5
		long			BRS Piatã	7

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
<b>22.</b>	<b>VG</b>	<b>Inflorescence: shape of rachis in transverse section</b>				
<b>(+)</b>						
<b>QL</b>	triangular				MIXE LN 45	1
	winged				Mulato II	2
	crescent				BRS Piatã	3
<b>23.</b>	<b>VG</b>	<b>Inflorescence: stigma color at anthesis</b>				
<b>(*)</b>						
<b>(+)</b>						
<b>PQ</b>	white				Mulato II	1
	pink				Mulato	2
	purple				BRS Piatã, MIXE LN 45	3
	dark purple				Marandú, Toledo	4
	black					5
<b>24.</b>	<b>VG</b>	<b>Spikelet: insertion on rachis</b>				
<b>(*)</b>						
<b>(+)</b>						
<b>QL</b>	uniseriate				Mulato II	1
	biseriate				Mulato	2
	combined				BRS Piatã, MIXE LN 45	3
<b>25.</b>	<b>VG</b>	<b>Spikelet: density of hairs</b>				
<b>QN</b>	absent or very sparse				BRS Piatã, MIXE LN 45	1
	sparse					3
	medium				Mulato II	5
	dense					7

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota	
<b>26.</b>	<b>VG</b>	<b>Time of beginning of flowering</b>					
(*)							
(+)							
<b>QN</b>	early				BRS Piatã	3	
	medium					5	
	late				MIXE LN 45, Mulato II	7	
<b>27.</b>		<b>Seed: color</b>				Example varieties tests are in process. Information to be added.	
<b>PQ</b>	green					1	
	yellow					2	
	purple					3	
	brown					4	

## 8. Explanations on the table of characteristics

### 8.1 *Explanations covering several characteristics*

- Definitions: Caespitosae means “growing in tufts” or “densely-clumped”, refers to the dense tufts of stems. The plants called “caespitosae” are vegetatively reproduced and are usually hybrid. Stolons are similar to normal stems except they produce adventitious roots at the nodes and run horizontally rather than vertically. They also have long internodes with reduced leaves, with the exception of stolons in aqueous plants. Plants with stolons or stolon-like rhizomes are called stoloniferous. A stolon is a plant propagation strategy and the complex of individuals formed by a mother plant and all its clones produced from stolons form a single genetic individual. Stolons lack the same type of reduced leaves that rhizomes have at the nodes; stolons have scale-like leaves and new roots are formed at the nodes only while rhizomes typically have paper like leaves at the nodes. Typically, stolons have very long internodes that form new plants at the ends. These rise to the soil surface and can produce foliage and flowers. In contrast, rhizomes most often have short internodes with leaf-scars and thin paper-like leaves and root along the underside of the stem. Root formation does not correspond strictly to the nodes but roots can generate from areas around the scar-like nodes as well.

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

- a) Unless otherwise stated, all observations on the vegetative characteristics should be done at full flowering stage, in the first growing cycle.
- b) All observations on culms and fully developed leaves should be made on the middle third of the plant.
  - a. When assessing characteristics of inflorescences, consider:
    1. *Flower stem*: distance between the flag leaf node and the insertion of the last raceme;
    2. *Flower stem axis*: distance between the first and the last raceme insertions; and
    3. *Rachis*: axis of the spikelet insertion.
  - b. On stoloniferous varieties, characteristics should be observed on rows. On caespitose growth varieties, characteristics should be observed on spaced plants.

## 8.2 Explanations for individual characteristics

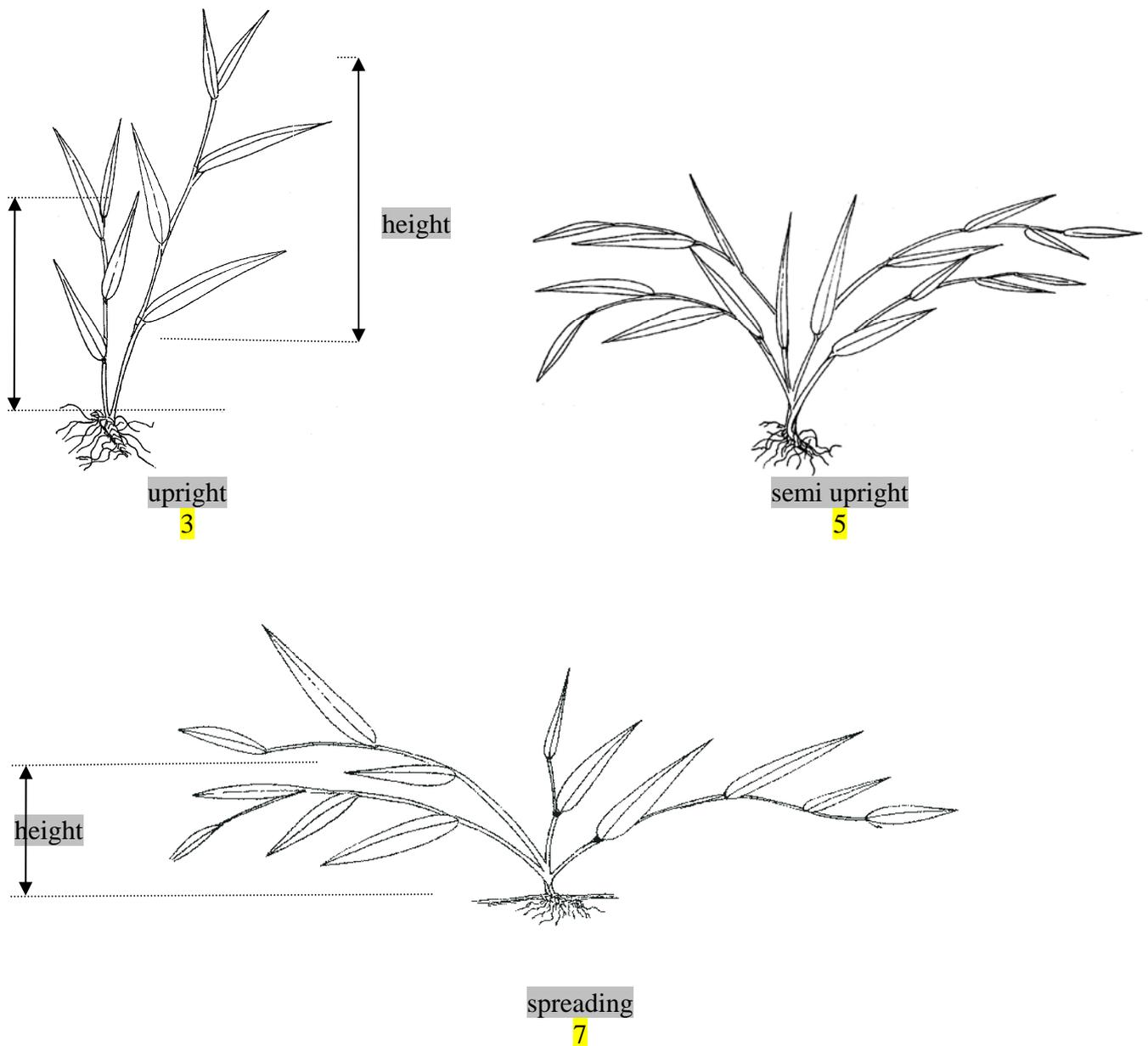
### Ad. 1: Plant: ploidy

The assessment of the level of ploidy must be done using standard cytological methods on samples of roots tips taken from 10 culms, randomly chosen.

### Ad. 2: Plant: growth habit

### Ad. 3: Plant: height

The height of the plant should be measured in the center of the plant, at the beginning of flowering, from the third fully developed leaf to the level ground, excluding inflorescences.



Ad. 5: Culm: number of nodal tillers

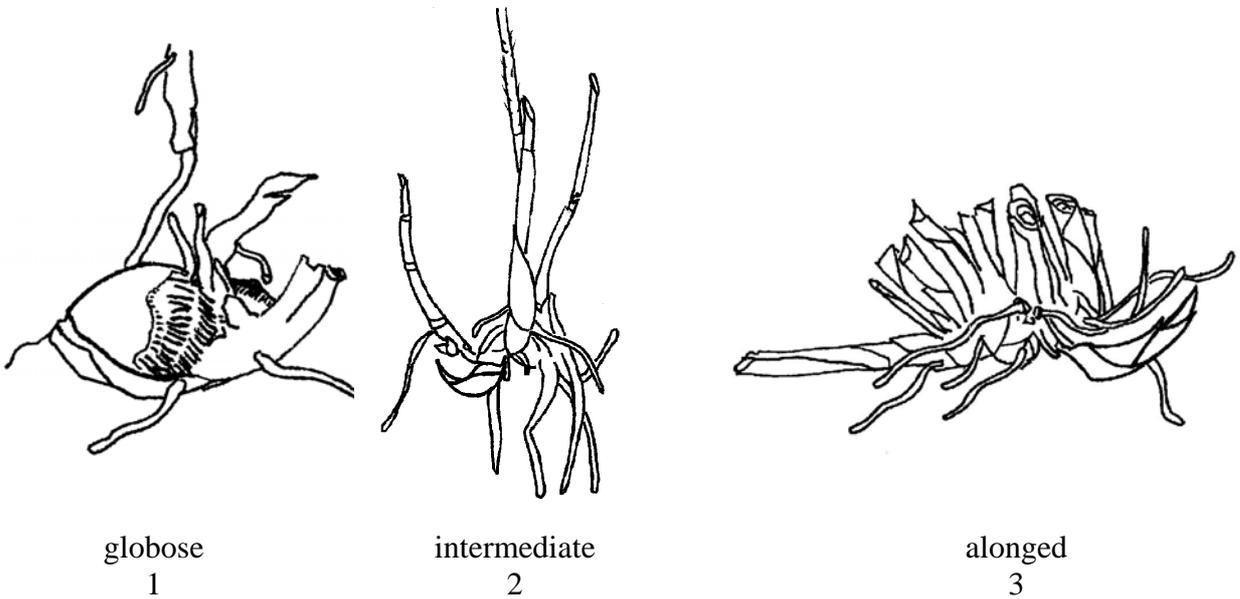
The assessment of the number of nodal tillers should be made 45 days after a standardization cut made at the maximum growing stage.

Ad. 6: Rhizome: development

Ad. 8: Stolon: development

The development of stolons and rhizomes should be assessed 3 months after sowing/planting.

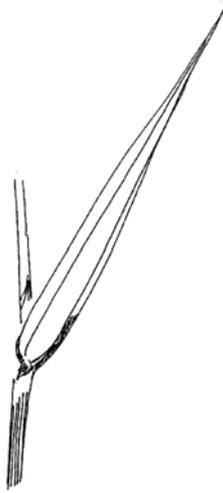
Ad. 7: Rhizome: shape



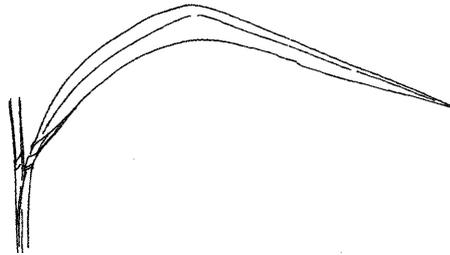
Ad. 9: Culm: length of internode

The assessment of the length of internode should be made medium third of plant.

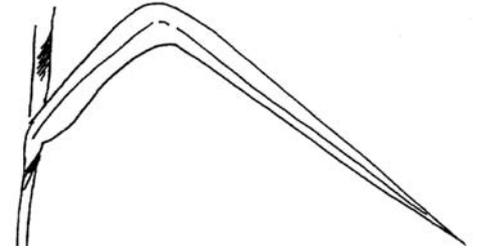
Ad. 11: Leaf: attitude



erect  
**3**



arched  
**5**



geniculate  
**7**

Ad. 23: Inflorescence: stigma color at anthesis

To be observed at anthesis.

Ad. 24: Spikelet: insertion on rachis

To consider:

*Combined* – spikelet that bears, simultaneously, uniseriate and biseriate insertions.

Ad. 26: Time of beginning of flowering

The time of beginning of flowering should be assessed on the second growing cycle, when 10% of the plants are flowering.

## 9. Literature

Assis, G.M.L. de, Euclides, R.F., Cruz, C.D. and Valle, C. B. do. 2003: Discriminação de Espécies de Brachiaria Baseada em Diferentes Grupos de Caracteres Morfológicos. R. Bras. Zootec., v.32, n.3, pp.576-584

Miles, J. W., Maass, B. L. and Valle, C. B. do. eds. 1996: Brachiaria: Biology, Agronomy, and Improvement. CIAT Publication No. 259

ISTA International Rules for Seed Testing (ISTA 1999, ISBN 3-906549-27-5)

10. Technical Questionnaire

TECHNICAL QUESTIONNAIRE		Page {x} of {y}	Reference Number:
		Application date: (not to be filled in by the applicant)	
<p>TECHNICAL QUESTIONNAIRE                  to be completed in connection with an application for plant breeders' rights</p>			
1. Subject of the Technical Questionnaire			
1.1 Botanical name	<i>Brachiaria brizantha</i> (Hochst. ex A. Rich.) Stapf. <i>Brachiaria decumbens</i> Stapf. R. Webster, <i>Brachiaria dictyoneura</i> (Fig. & De Not.) Veldkamp P. <i>Brachiaria humidicola</i> (Rendle) Morrone & Zuloaga., <i>Brachiaria ruziziensis</i> R. Germ. & Evrard. and their hybrids		
1.2 Common Name	Brachiaria, Spreading liverseed grass Palisade grass Congo signal grass Creeping signal grass		
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	<input type="text"/>		

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
(if available)		
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)  
 .....

4.2 Method of propagating the variety

4.2.1 Seed-propagated varieties

- (a) Self-pollination [ ]
- (b) Cross-pollination [ ]
  - (i) population [ ]
  - (ii) synthetic variety [ ]
- (c) Hybrid [ ]  
 (see below)
- (d) Other [ ]  
 (please provide details)

4.2.2 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:
<p>In the case of hybrid varieties the production scheme for the hybrid should be provided on a separate sheet. This should provide details of all the parent lines required for propagating the hybrid e.g.</p> <p>Single Hybrid</p> <p style="padding-left: 40px;">(... female parent ...) x (... male parent ...)</p> <p>Three-Way Hybrid</p> <p style="padding-left: 40px;">(... female line ...) x (... male line ...)</p> <p style="padding-left: 80px;">=&gt; single hybrid used as female parent x (... male parent ...)</p> <p>and should identify in particular:</p> <ul style="list-style-type: none"><li>(a) any male sterile lines</li><li>(b) maintenance system of male sterile lines.</li></ul>		

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	
<p><b>5.1 Plant: ploidy (1)</b></p>			
diploid		2[...]	
triploid		3[...]	
tetraploid		4[...]	
pentaploid		5[...]	
hexaploid		6[...]	
heptaploid		7[...]	
<p><b>5.2 Inflorescence: stigma color at anthesis (23)</b></p>			
white	Mulato II	1[...]	
pink	Mulato	2[...]	
purple	BRS Piatã, MIXE LN 45	3[...]	
dark purple	Marandú, Toledo	4[...]	
black		5[...]	
<p><b>5.3 Spikelet: insertion on rachis (24)</b></p>			
uniseriate	Mulato II	1[...]	
biseriate	Mulato	2[...]	
combined	BRS Piatã, MIXE LN 45	3[...]	

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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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 <b>similar</b> variety(ies)	Describe the expression of the characteristic(s) for <b>your</b> candidate variety
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<i>Example</i>	
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<p>Comments:</p>
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TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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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".

.....

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]