



TG/ZOYSI(proj.5)  
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## INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

Geneva

DRAFT

### ZOYSIA GRASSES

UPOV Code(s): ZOYSI

*Zoysia* Willd.

### GUIDELINES

#### FOR THE CONDUCT OF TESTS

#### FOR DISTINCTNESS, UNIFORMITY AND STABILITY

*prepared by experts from Japan  
 to be considered by the  
 Technical Working Party for Agricultural Crops  
 at its fifty-third session, to be held virtually  
 from 2024-05-27 to 2024-05-30*

*Disclaimer: this document does not represent UPOV policies or guidance*

Alternative names:\*

<i>Botanical name</i>	<i>English</i>	<i>French</i>	<i>German</i>	<i>Spanish</i>
<i>Zoysia</i> Willd.	Japanese Lawn Grass	Zoysia	Zoysia	Zoysia

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 *Zoysia* Willd.

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 plants.

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

25 plants.

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*

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

3.1.2 The two independent growing cycles should be in the form of two separate plantings.

3.1.3 The testing of a variety may be concluded when the competent authority can determine with certainty the outcome of the test.

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 optimum stage of development for the assessment of each characteristic is indicated by a number in the Table of Characteristics. The stages of development denoted by each number are described in Chapter 8.

3.4 *Test Design*

3.4.1 Each test should be designed to result in a total of at least 15 plants, which should be divided between at least 2 replicates.

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 *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.

###### 4.1.4 Number of Plants or Parts of Plants to be Examined

Unless otherwise indicated, for the purposes of distinctness, all observations on single plants should be made on 10 plants or parts of plants taken from each of 10 plants and any other observations made on all plants in the test, disregarding any off-type plants.

###### 4.1.5 Method of Observation

The recommended method of observing the characteristic for the purposes of distinctness is indicated by the following key in the Table of Characteristics (see document TGP/9 "Examining Distinctness", Section 4 "Observation 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

Type of observation: visual (V) or measurement (M)

"Visual" observation (V) is an observation made on the basis of the expert's judgment. For the purposes of this document, "visual" observation refers to the sensory observations of the experts and, therefore, also includes smell, taste and touch. Visual observation includes observations where the expert uses reference points (e.g. diagrams, example varieties, side-by-side comparison) or non-linear charts (e.g. color charts). Measurement (M) is an objective observation against a calibrated, linear scale e.g. using a ruler, weighing scales, colorimeter, dates, counts, etc.

Type of record: for a group of plants (G) or for single, individual plants (S)

For the purposes of distinctness, observations may be recorded as a single record for a group of plants or parts of plants (G), or may be recorded as records for a number of single, individual plants or parts of plants (S). In most cases, "G" provides a single record per variety and it is not possible or necessary to apply statistical methods in a plant-by-plant analysis for the assessment of distinctness.

In cases where more than one method of observing the characteristic is indicated in the Table of Characteristics (e.g. VG/MG), guidance on selecting an appropriate method is provided in document TGP/9, Section 4.2.

## 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 These Test Guidelines have been developed for the examination of vegetatively propagated varieties. For varieties with other types of propagation, the recommendations in the General Introduction and document TGP/13 "Guidance for new types and species" Section 4.5 "Testing Uniformity" should be followed.
- 4.2.3 For the assessment of uniformity 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 15 plants, 1 off-type is 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 further examined by testing a new plant stock to ensure that it exhibits the same characteristics as those shown by the initial 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: number of ears (characteristic 3)
  - (b) Culm: length (characteristic 4)
  - (c) Ear: anthocyanin coloration of spikelets (characteristic 9)
  - (d) Stolon: anthocyanin coloration (characteristic 18)
  - (e) Leaf blade: length (characteristic 19)
  - (f) Leaf blade: width (characteristic 20)
- 5.4 Guidance for the use of grouping characteristics, in the process of examining distinctness, is provided through the General Introduction and document TGP/9 "Examining Distinctness".

## 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

6.2.1 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.

6.2.2 All relevant states of expression are presented in the characteristic.

6.2.3 Further explanation of the presentation of states of expression and notes is provided in document TGP/7 “Development of Test Guidelines”.

## 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

English		français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
1	2	3	4	5	6	7
Name of characteristics in English		Nom du caractère en français	Name des Merkmals auf Deutsch	Nombre del carácter en español		
states of expression		types d'expression	Ausprägungsstufen	tipos de expresión		

1 Characteristic number

2 (\*) Asterisked characteristic – see Chapter 6.1.2

3 Type of expression  
 QL Qualitative characteristic – see Chapter 6.3  
 QN Quantitative characteristic – see Chapter 6.3  
 PQ Pseudo-qualitative characteristic – see Chapter 6.3

4 Method of observation (and type of plot, if applicable)  
 MG, MS, VG, VS – see Chapter 4.1.5

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

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

7 Growth stage key See Explanations on the Table of Characteristics in Chapter 8.3

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>QN</b>	<b>MG</b>	<b>(+)</b>	<b>10</b>			
	<b>Time of beginning of vegetative growth after overwintering</b>						
	very early						1
	early					Ryokko	2
	medium					Emerald	3
	late					Shiba Chukanbohon Nou 1 Go	4
	very late						5
<b>2. (*)</b>	<b>QN</b>	<b>MG</b>	<b>(b)</b>	<b>20</b>			
	<b>Time of beginning of ear emergence</b>						
	very early						1
	very early to early						2
	early						3
	early to medium					TM9	4
	medium					Meyer	5
	medium to late						6
	late						7
	late to very late						8
	very late						9
<b>3. (*)</b>	<b>QN</b>	<b>VG</b>	<b>(b)</b>	<b>29</b>			
	<b>Plant: number of ears</b>						
	none or very few					Emerald	1
	few						2
	medium					Tsukuba taro	3
	many					Meyer	4
	very many						5

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
<b>4.</b>	<b>QN</b>	<b>MS/VG</b>	<b>(b), (c)</b>	<b>29</b>		
	<b>Culm: length</b>					
	very short					1
	very short to short					2
	short				Chiba fair green	3
	short to medium					4
	medium				Meyer	5
	medium to long					6
	long				Asagake	7
	long to very long					8
	very long					9
<b>5.</b>	<b>QN</b>	<b>VG</b>	<b>(+)</b>	<b>(b), (c)</b>	<b>29</b>	
	<b>Ear: position relative to foliage</b>					
	below				GZ-006	1
	same level				G-10	2
	above				Diamond	3
<b>6. (*)</b>	<b>QN</b>	<b>MS/VG</b>	<b>(b)</b>	<b>29</b>		
	<b>Ear: length</b>					
	very short					1
	very short to short					2
	short				Mijoka	3
	short to medium					4
	medium				Meyer	5
	medium to long					6
	long				Tsukuba taro	7
	long to very long					8
	very long					9
<b>7.</b>	<b>QN</b>	<b>MS/VG</b>	<b>(b)</b>	<b>29</b>		
	<b>Ear: number of spikelets</b>					
	very few				Emerald	1
	few				TM9	2
	medium				Meyer	3
	many					4
	very many					5



	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
<b>8. (*)</b>	<b>QN</b>	<b>MS/VG</b>	<b>(b)</b>	<b>29</b>		
	<b>Ear: length of spikelets</b>					
	short				Mijoka	1
	medium				Meyer	2
	long					3
<b>9. (*)</b>	<b>QN</b>	<b>VG</b>	<b>(+)</b>	<b>(b)</b>	<b>29</b>	
	<b>Ear: anthocyanin coloration of spikelets</b>					
	absent or very weak				Ryokko	1
	very weak to weak					2
	weak				Tsukuba taro	3
	weak to medium					4
	medium				Enrumu	5
	medium to strong					6
	strong				Meyer	7
	strong to very strong					8
	very strong					9
<b>10</b>	<b>QN</b>	<b>VG</b>	<b>(+)</b>	<b>(d)</b>		
	<b>Plant: attitude of leaves</b>					
	erect					1
	semi-erect				Tsukuba taro	2
	intermediate				Emerald	3
	semi-prostrate				TM9	4
	prostrate					5
<b>11 (*)</b>	<b>QN</b>	<b>MS/VG</b>	<b>(+)</b>	<b>(d)</b>		
	<b>Plant: height</b>					
	very short				TM9	1
	short					2
	medium				Meyer	3
	tall					4
	very tall				Asagake	5

	English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
<b>12</b>	<b>QN</b>	<b>VG</b>	<b>(+)</b>	<b>(d)</b>				
	<b>Plant: density of stolons</b>							
	sparse						Ijani	1
	medium							2
	dense						TM neo	3
<b>13 (*)</b>	<b>QN</b>	<b>MS/VG</b>	<b>(+)</b>	<b>(d)</b>				
	<b>Stolon: length</b>							
	very short							1
	very short to short							2
	short						Mijoka	3
	short to medium							4
	medium						Emerald	5
	medium to long							6
	long						Asagake	7
	long to very long							8
	very long							9
<b>14 (*)</b>	<b>QN</b>	<b>MS/VG</b>	<b>(+)</b>	<b>(d)</b>				
	<b>Stolon: internode length</b>							
	very short							1
	very short to short							2
	short						Mijoka	3
	short to medium							4
	medium						Meyer	5
	medium to long							6
	long						Asagake	7
	long to very long							8
	very long							9
<b>15</b>	<b>QN</b>	<b>MS/VG</b>	<b>(+)</b>	<b>(d)</b>				
	<b>Stolon: internode width</b>							
	very narrow						Tsukuba hime	1
	narrow							2
	medium						TM9	3
	broad							4
	very broad						Ryokko	5

	English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
<b>16</b>	<b>(*)</b>	<b>QN</b>	<b>VG</b>	<b>(+)</b>	<b>(d)</b>			
		<b>Stolon leaf: anthocyanin coloration of sheath</b>						
		absent or very weak					Ryokko	1
		weak					Emerald	2
		medium						3
		strong					Enrumu	4
		very strong						5
<b>17</b>		<b>QN</b>	<b>MS</b>	<b>(+)</b>	<b>(d)</b>			
		<b>Stolon leaf: length of sheath</b>						
		very short						1
		short					Mijoka	2
		medium					Meyer	3
		long					Ijani	4
		very long						5
<b>18</b>	<b>(*)</b>	<b>QN</b>	<b>VG</b>	<b>(+)</b>	<b>(d)</b>			
		<b>Stolon: anthocyanin coloration</b>						
		absent or very weak					Ryokko	1
		weak						2
		medium						3
		strong					Enrumu	4
		very strong						5
<b>19</b>	<b>(*)</b>	<b>QN</b>	<b>MS/VG</b>	<b>(+)</b>	<b>(d)</b>			
		<b>Leaf blade: length</b>						
		very short					TM neo	1
		very short to short						2
		short					Emerald	3
		short to medium						4
		medium					Tsukuba green	5
		medium to long						6
		long					Asagake	7
		long to very long						8
		very long					Tsukuba taro	9

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
<b>20</b>	<b>(*)</b>	<b>QN</b>	<b>MS/VG</b>	<b>(d)</b>		
	<b>Leaf blade: width</b>					
	very narrow				Mijoka	1
	narrow					2
	medium				Meyer	3
	broad					4
	very broad				Asagake	5
<b>21</b>	<b>QN</b>	<b>VG</b>	<b>(d)</b>			
	<b>Leaf blade: intensity of green color</b>					
	very light					1
	very light to light					2
	light				Ayamidori	3
	light to medium					4
	medium				Emerald	5
	medium to dark					6
	dark				Chiba fair green	7
	dark to very dark					8
	very dark					9
<b>22</b>	<b>QN</b>	<b>VG</b>	<b>(+)</b>	<b>(d)</b>		
	<b>Leaf blade: density of hairs on upper side</b>					
	absent or very sparse				Emerald	1
	sparse				Meyer	2
	medium					3
	dense					4
	very dense					5

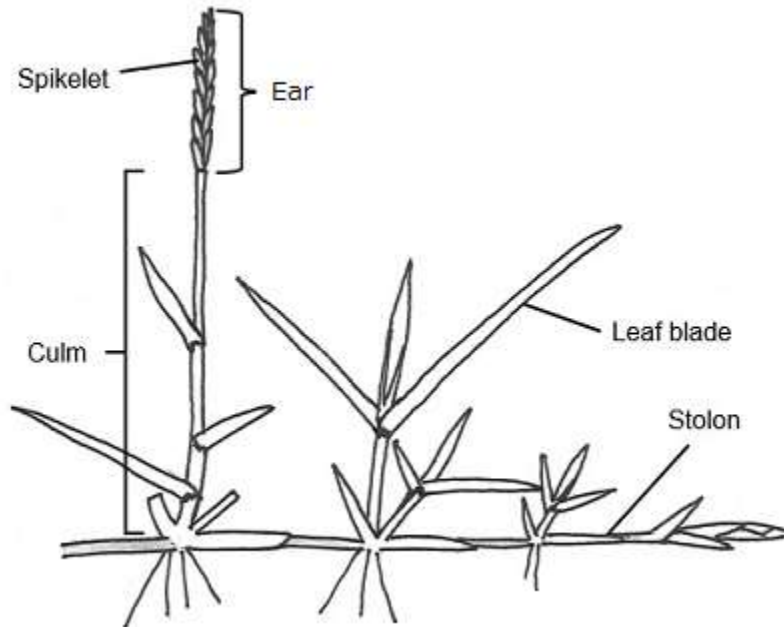
	English		français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
<b>23</b>	<b>(*)</b>	<b>QN</b>	<b>MG</b>	<b>(+)</b>	<b>40</b>		
	<b>Time of leaf senescence</b>						
		very early					1
		very early to early					2
		early				TM9	3
		early to medium					4
		medium				Emerald	5
		medium to late					6
		late				Mijoka	7
		late to very late					8
		very late					9
<b>24</b>		<b>PQ</b>	<b>VG</b>	<b>(+)</b>	<b>45</b>		
		<b><u>Leaf: color before dormancy</u></b>					
		yellow				Ryokko	1
		brown				TM9	2
		purple				Tsukuba taro	3

8. Explanations on the Table of Characteristics

8.1 *Explanations covering several characteristics*

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

(a)



(b) Observations should be made at the time of first ear emergence after overwintering. Many varieties emerge ears in spring, but varieties that produce ears only in the autumn should be observed in the autumn.

The following characteristics are observed except the varieties without ear.

- Ad. 2: Time of ear emergence
- Ad. 4: Culm: length
- Ad. 5: Ear: position relative to foliage
- Ad. 6: Ear: length
- Ad. 7: Ear: number of spikelets
- Ad. 8: Ear: length of spikelets
- Ad. 9: Ear: anthocyanin coloration of spikelets

(c) Observations should be made on culms from the middle third of the plant.

(d) The plants, stolons, and leaves should be observed 4 months after time of beginning of vegetative growth after overwintering.

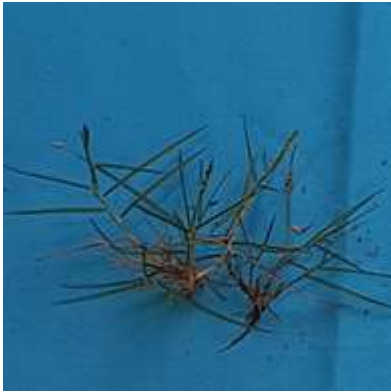
## 8.2 Explanations for individual characteristics

### Ad. 1: Time of beginning of vegetative growth after overwintering

The time of vegetative growth after overwintering is observed when new leaves can be seen on the stems of about 50% of the plants after overwintering.



### Ad. 5: Ear: position relative to foliage



1  
below



2  
same level



3  
above

### Ad. 9: Ear: anthocyanin coloration of spikelets



1  
absent or very weak



3  
weak



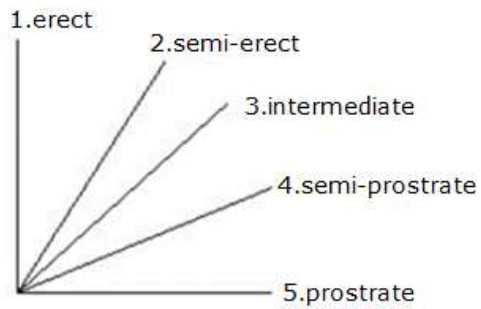
5  
medium



7  
strong

Ad. 10: Plant: attitude of leaves

Observations should be made visually from the attitude of the leaves and the development of lateral stolons. The angle formed by the outer leaves with an imaginary middle axis should be used.



Ad. 11: Plant: height



Ad. 12: Plant: density of stolons

Observe the density of the stolon extending to the outside of the leaves.



1  
sparse



3  
dense



Ad. 13: Stolon: length

Measure from the center of planted position to the tip of the longest stolon.



Ad. 14: Stolon: internode length

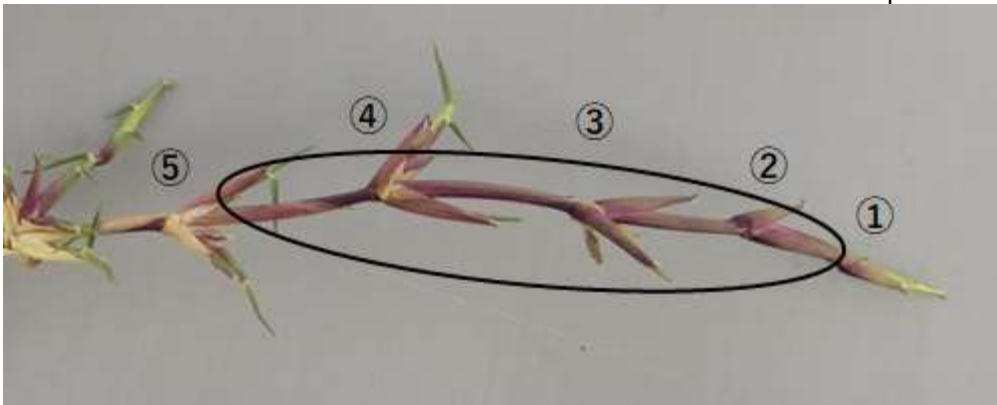
Observations should be made between the 4th and the 5th node from the tip of the stolon.

Ad. 15: Stolon: internode width

Observations should be made between the 4th and the 5th node from the tip of the stolon excluding leaf sheath.

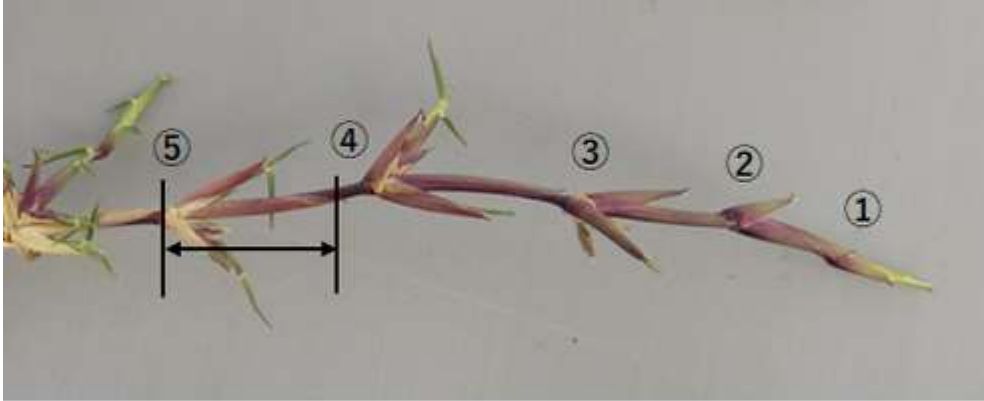
Ad. 16: Stolon leaf: anthocyanin coloration of sheath

Observations should be made between the 1st and the 5th node from the tip of the stolon.



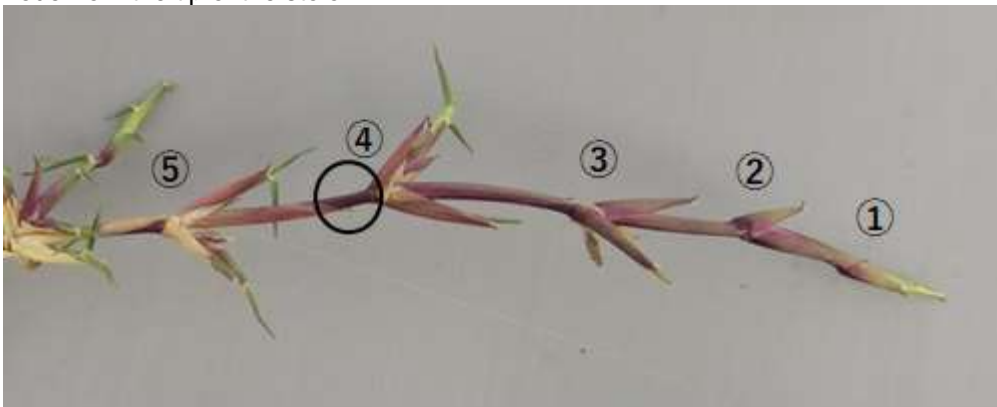
Ad. 17: Stolon leaf: length of sheath

Observations should be made between the 4th and the 5th node from the tip of the stolon.



Ad. 18: Stolon: anthocyanin coloration

Observations should be made stolons which is not covered by a leaf sheath, between the 4th and the 5th node from the tip of the stolon.



Ad. 19: Leaf blade: length

Observations should be made the leaves in the middle between the planted position and the tip of the stolon.



Ad. 22: Leaf blade: density of hairs on upper side

Observe the hairs on upper side visually or with a magnifying glass. Easy to observe with black background.

Ad. 23: Time of leaf senescence

Observations should be made when 50% of the leaves have changed color in autumn.”

Ad. 24: Leaf: color before dormancy



8.3 Growth stages for Zoysia

- 10: Beginning of vegetative growth
- 20: Beginning of ear emergence
- 29: Ear emergence completed
- 40: Beginning of leaf color change
- 45: Leaf color change completed

9. Literature

Japanese Society of Turfgrass Science., 2001: Handbook: management of turf and turfgrass research. Soft science Co., Tokyo, Japan

Asano, T., Aoki, K., 1998: Turfgrasses and the cultivars., Soft science Co., Tokyo, Japan

10. Technical Questionnaire

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
		Application date: (not to be filled in by the applicant)
TECHNICAL QUESTIONNAIRE to be completed in connection with an application for plant breeders' rights		
1. Subject of the Technical Questionnaire		
1.1	Botanical name	<input type="text" value="Zoysia Willd."/>
1.2	Common name	<input type="text" value="Japanese Lawn 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 (if available)	<input type="text"/>
	Breeder's reference	<input type="text"/>

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

4.1 Breeding scheme

Variety resulting from:

4.1.1 Crossing [ ]

(a) controlled cross [ ]

(please state parent variety)

(.....) x (.....)

female parent male parent

(b) partially known cross [ ]

(please state known parent variety(ies))

(.....) x (.....)

female parent male parent

(c) unknown cross [ ]

4.1.2 Mutation [ ]

(please state parent variety)

4.1.3 Discovery and development [ ]

(please state where and when discovered and how developed)

4.1.4 Other [ ]

(Please provide details)

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

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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4.2	Method of propagating the variety	
4.2.1	Vegetative propagation	
(a)	Division	[ ]
(b)	Rhizomes	[ ]
(c)	Other (state method)	[ ]
	<input type="text"/>	
4.2.2	Other (Please provide details)	[ ]
	<input type="text"/>	

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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5. Characteristics of the variety to be indicated (the number in brackets refers to the corresponding characteristic in Test Guidelines; please mark the note which best corresponds).

Characteristics	Example Varieties	Note
<b>5.1 Time of beginning of ear emergence (2)</b>		
very early		1 [ ]
very early to early		2 [ ]
early		3 [ ]
early to medium	TM9	4 [ ]
medium	Meyer	5 [ ]
medium to late		6 [ ]
late		7 [ ]
late to very late		8 [ ]
very late		9 [ ]
<b>5.2 Plant: number of ears (3)</b>		
none or very few	Emerald	1 [ ]
few		2 [ ]
medium	Tsukuba taro	3 [ ]
many	Meyer	4 [ ]
very many		5 [ ]
<b>5.3 Culm: length (4)</b>		
very short		1 [ ]
very short to short		2 [ ]
short	Chiba fair green	3 [ ]
short to medium		4 [ ]
medium	Meyer	5 [ ]
medium to long		6 [ ]
long	Asagake	7 [ ]
long to very long		8 [ ]
very long		9 [ ]



Characteristics	Example Varieties	Note
<b>5.4 Ear: anthocyanin coloration of spikelets (9)</b>		
absent or very weak	Ryokko	1 [ ]
very weak to weak		2 [ ]
weak	Tsukuba taro	3 [ ]
weak to medium		4 [ ]
medium	Enrumu	5 [ ]
medium to strong		6 [ ]
strong	Meyer	7 [ ]
strong to very strong		8 [ ]
very strong		9 [ ]
<b>5.5 Stolon: anthocyanin coloration (18)</b>		
absent or very weak	Ryokko	1 [ ]
weak		2 [ ]
medium		3 [ ]
strong	Enrumu	4 [ ]
very strong		5 [ ]
<b>5.6 Leaf blade: length (19)</b>		
very short	TM neo	1 [ ]
very short to short		2 [ ]
short	Emerald	3 [ ]
short to medium		4 [ ]
medium	Tsukuba green	5 [ ]
medium to long		6 [ ]
long	Asagake	7 [ ]
long to very long		8 [ ]
very long	Tsukuba taro	9 [ ]
<b>5.7 Leaf blade: width (20)</b>		
very narrow	Mijoka	1 [ ]
narrow		2 [ ]
medium	Meyer	3 [ ]
broad		4 [ ]
very broad	Asagake	5 [ ]

Characteristics	Example Varieties	Note
<b>5.8 Time of leaf senescence (23)</b>		
very early		1 [ ]
very early to early		2 [ ]
early	TM9	3 [ ]
early to medium		4 [ ]
medium	Emerald	5 [ ]
medium to late		6 [ ]
late	Mijoka	7 [ ]
late to very late		8 [ ]
very late		9 [ ]

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
<i>Example</i>	<i>Stolon: anthocyanin coloration</i>	<i>medium</i>	<i>strong</i>
Comments:			

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

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

Yes  No

(If yes, please provide details)

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

Yes  No

(If yes, please provide details)

7.3 Other information

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

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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8. Authorization for release

(a) Does the variety require prior authorization for release under legislation concerning the protection of the environment, human and animal health?

Yes [ ] No [ ]

(b) Has such authorization been obtained?

Yes [ ] No [ ]

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

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]