

TG/COIX(proj.3)
ORIGINAL: English
DATE: 2013-05-02

INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

Geneva

DRAFT

ADLAY

UPOV Code: COIXX_MAY

Coix lacryma-jobi L. var. ma-yuen (Rom. Caill.) Stapf.

GUIDELINES

FOR THE CONDUCT OF TESTS

FOR DISTINCTNESS, UNIFORMITY AND STABILITY

prepared by an expert from Japan

to be considered by the

Technical Working Party for Agricultural Crops at its forty-second session, to be held in Kyiv, Ukraine, from June 17 to 21, 2013

Alternative Names:

Botanical name	English	French	German	Spanish
Coix lacryma-jobi L. var. ma-yuen (Rom. Caill.) Stapf., Coix ma-yuen Roman.	Adlay, Coix	Coix, Larme de Job	Coix, Tränengrass	Coix, Lágrimas de David o de Job

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

ASSOCIATED DOCUMENTS

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

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

TG/COIX(proj.3) Adlay, 2013-05-02 - 2 -

TAE	BLE OF CONTENTS	PAGE
1.	SUBJECT OF THESE TEST GUIDELINES	3
2.	MATERIAL REQUIRED	3
3.	METHOD OF EXAMINATION	3
	3.1 Number of Growing Cycles 3.2 Testing Place 3.3 Conditions for Conducting the Examination 3.4 Test Design 3.5 Additional Tests	3 3
4.	ASSESSMENT OF DISTINCTNESS, UNIFORMITY AND STABILITY	4
	4.1 DISTINCTNESS 4.2 UNIFORMITY 4.3 STABILITY	5
5.	GROUPING OF VARIETIES AND ORGANIZATION OF THE GROWING TRIAL	5
6.	INTRODUCTION TO THE TABLE OF CHARACTERISTICS	5
	6.1 CATEGORIES OF CHARACTERISTICS	6 6
7.	TABLE OF CHARACTERISTICS/TABLEAU DES CARACTÈRES/MERKMALSTABELLE/TABLA DE CARACTERES	7
8.	EXPLANATIONS ON THE TABLE OF CHARACTERISTICS	11
	EXPLANATIONS COVERING SEVERAL CHARACTERISTICS	
9.	LITERATURE	16
10.	TECHNICAL QUESTIONNAIRE	17

- 3 -

1. Subject of these Test Guidelines

These Test Guidelines apply to all varieties of *Coix lacryma-jobi* L. var. *ma-yuen* (Rom. Caill.) Stapf. 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.
- 2.3 The minimum quantity of plant material, to be supplied by the applicant, should be:

500g 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

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.

3.4 Test Design

Each test should be designed to result in a total of at least 100 plants, which should be divided between at least 2 replicates.

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 / Parts of Plants to be Examined

Unless otherwise indicated, for the purposes of distinctness, all observations on single plants should be made on 20 plants or parts taken from each of 20 plants and any other observations made on all plants in the test, disregarding any off-type plants. In the case of observations of parts taken from single plants, the number of parts to be taken from each of the plants should be 1.

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 second column of 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.

- 5 -

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 For the assessment of uniformity, a population standard of 1% and an acceptance probability of at least 95% should be applied. In the case of a sample size of 100 plants, 3 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 further examined by testing a new seed stock to ensure that it exhibits the same characteristics as those shown by the initial material supplied.

5. <u>Grouping of Varieties and Organization of the Growing Trial</u>

- 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 5)
 - (b) Culm: intensity of anthocyanin coloration (characteristic 7)
 - (c) Stigma: presence of anthocyanin coloration (characteristic 16)
 - (d) Time of maturity (characteristic 17)
 - (e) Grain: main color (characteristic 22)
- 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 In the case of qualitative and pseudo-qualitative characteristics (see Chapter 6.3), all relevant states of expression are presented in the characteristic. However, in the case of quantitative characteristics with 5 or more states, an abbreviated scale may be used to minimize the size of the Table of Characteristics. For example, in the case of a quantitative characteristic with 9 states, the presentation of states of expression in the Test Guidelines may be abbreviated as follows:

State	Note
small	3
medium	5
large	7

However, it should be noted that all of the following 9 states of expression exist to describe varieties and should be used as appropriate:

State	Note
very small	1
very small to small	2
small	3
small to medium	4
medium	5
medium to large	6
large	7
large to very large	8
very large	9

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

(*) 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 4.1.5

- (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. <u>Table of Characteristics/Tableau des caractères/Merkmalstabelle/Tabla de caracteres</u>

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
1. (+)	VG	Seedling: intensity of anthocyanin coloration					
QN		absent				Okayamazairai	1
		weak				Nakasatozairai	3
		strong				Akishizuku	5
2.	VG	Plant: growth habit					
(+)							
QN	(a)	upright					1
		semi upright				Okayamazairai	2
		spreading					3
3. (+)	MS/ VG	Plant: range of grain distribution					
QN	(b)	narrow				Hatohikari, Kuroishizairai	3
		medium				Hatoyutaka, Okayamazairai	5
		broad					7
4.	MS/ VG	Plant: number of culms					
QN	(b)	few					1
		medium				Hatohikari, Okayamazairai	3
		many				Akishizuku, Kuroishizairai	5
5. (*) (+)	MS	Plant: length					
QN	(b)	short				Hatoyutaka	3
	(d)	medium				Akishizuku	5
		long				Okayamazairai	7
6.	MS	Culm: diameter					
(+)							
QN	(b)	small				Hatojiro, Kuroishizairai	1
	(d)	medium				Akishizuku, Hatoyutaka	3
		large				Okayamazairai	5
7. (*)	VG	Culm: intensity of anthocyanin coloration					
QN	(b)	absent or very weak				Okayamazairai	1
		weak				Nakasatozairai	3
		medium					5
		strong					7

,	20	ı
	- 8	-

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
8. (+)	MG/ VG	Culm: number of sheathing bracts					
QN	(b)	few				Kitanohato	3
	(d)	medium				Hatoyutaka	5
	()	many				,	7
9.	MG/ VG	Culm: total number of grains					
QN	(c)	few					3
	(d)	medium				Kitanohato	5
		many				Hatohikari	7
10.	VG	Culm: glaucosity					
QL	(a)	absent					1
		present					9
11.	MS	Leaf blade: length					
(+)							
QN	(a)	short				Hatojiro	3
	(d)	medium				Hatoyutaka, Nakasatozairai	5
		long				Okayamazairai	7
12.	MS	Leaf blade: width					
(+)							
QN	(a)	narrow				Kitanohato	3
	(d)	medium				Hatoyutaka, Nakasatozairai	5
		broad					7
13. (+)	MS	Sheathing bract: length					
QN	(b)	short				Hatoyutaka	3
	(d)	medium				Okayamazairai	5
		long					7
14. (+)	VG	Sheathing bract: intensity of anthocyanin coloration					
QN	(b)	absent or very weak				Okayamazairai	1
		weak				Nakasatozairai	3
		medium				Akishizuku	5
		strong					7

_	9	_

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
15.	MG	Time of first heading					
QN	(a)	early				Kuroishizairai, Hatojiro, Hatoyutaka	3
		medium					5
		late				Okayamazairai	7
16. (*) (+)	VG	Stigma: presence of anthocyanin coloration					
QL		absent				Hatojiro, Okayamazairai	1
		present				Akishizuku, Miyagizairai	9
17. (*)	MG	Time of maturity					
QN	(b)	early				Hatojiro, Kuroishizairai	3
		medium				Akishizuku	5
		late				Okayamazairai	7
18.	MS	Grain: length					
(+)							
QN	(c)	short					1
		medium					2
		long					3
19.	MS	Grain: width					
(+)							
QN	(c)	narrow					1
		medium					2
		broad					3
20.	VG	Grain: shape					
(+)							
PQ	(c)	ovate				Akishizuku	1
		elliptic				Hatojiro	2
		circular				Ohotsuku NO.1	3
21.	MG	Grain: weight of 100					
QN	(c)	low				Akishizuku, Kuroishizairai	3
		medium				Hatoyutaka, Nakasatozairai	5
		high				Hatojiro	7

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
22. (*) (+)	VG	Grain: main color					
PQ	(c)	white					1
		grey					2
		brown				Nakasatozairai	3
		dark brown				Okayamazairai	4
		black				Kuroishizairai	5
23.	VG	Grain: secondary color					
(+)		COIOI					
QL	(c)	absent					1
		present					9
24.	MG	Grain: hardness					
(+)							
QN	(c)	soft				Hatoyutaka	3
		medium				Akishizuku, Okayamazairai	5
		hard				Hatojiro	7
25. (+)	MS	Decorticated grain: length					
QN	(c)	short					1
	(-)	medium					2
		long					3
26.	MS	Decorticated grain: width					
(+)							
QN	(c)	narrow					1
		medium					2
		broad					3
27.	VG	Decorticated grain: intensity of brown color					
QN	(c)	light					3
		medium					5
		dark					7
28.	VG	Endosperm: type					
(+)							
QL	(c)	glutinous					1
		non-glutinous					2

8. <u>Explanations on the Table of Characteristics</u>

8.1 Explanations covering several characteristics

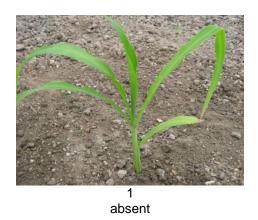
Characteristics containing the following key in the second column of the Table of Characteristics should be examined as indicated below:

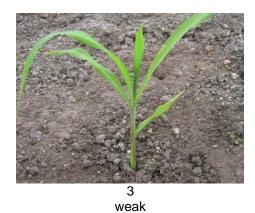
- (a) Observations should be made when the first panicle is visible in 50% of plants.
- (b) Observations should be made when 80% of grains are ripening.
- (c) To be observed on fully developed grains at harvest time.
- (d) To be measured on the longest culm.

8.2 Explanations for individual characteristics

Ad. 1: Seedling: intensity of anthocyanin coloration

To be observed on the 4 leaves unfolded.







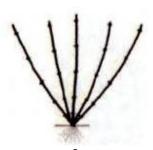
strong

Ad. 2: Plant: growth habit



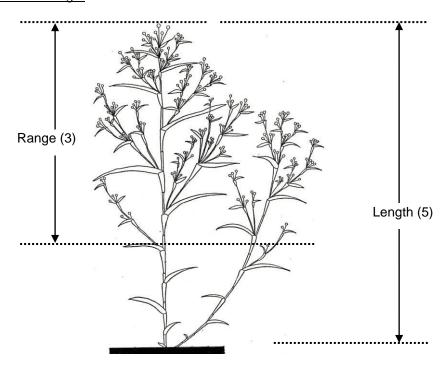


2 semi upright



3 spreading

Ad. 3: Plant: range of grain distribution Ad. 5: Plant: length



© K.Ishida, 1981: Hatomugi, Nosan Gyoson Bunka Kyokai (Nobunkyo), 48

Ad. 6: Culm: diameter

To be observed at the middle of internode in the central part of the longest culm.

Ad. 8: Culm: number of sheathing bracts

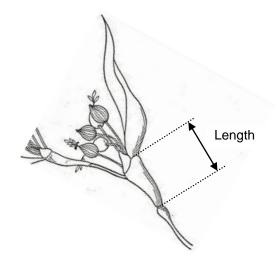
To be observed bract which have sheathing leaf with axillary inflorescence.

Ad. 11: Leaf blade: length Ad. 12: Leaf blade: width

To be observed at two thirds from the base of the longest culm.

Ad. 13: Sheathing bract: length

To be observed on the largest sheathing bract of the longest culm, excluding blade.



© K.Ishida, 1981: Hatomugi, Nosan Gyoson Bunka Kyokai (Nobunkyo), 45

Ad. 14: Sheathing bract: intensity of anthocyanin coloration

To be observed on sheathing bracts, including blade.

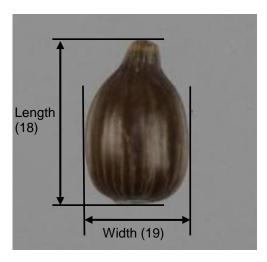
Ad. 16: Stigma: presence of anthocyanin coloration

To be observed at the time of fully developed stigma.





Ad. 18: Grain: length Ad. 19: Grain: width



Ad. 20: Grain: shape



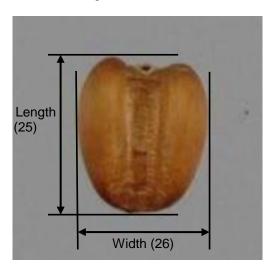
Ad. 22: Grain: main color Ad. 23: Grain: secondary color

The main color is the color with the largest surface area. The secondary color is the color with the second largest surface area. If the area of the colors is nearly half and half, the darker color is the main color.

Ad. 24: Grain: hardness

To be observed as the ease with which the grain can be broken by hand.

Ad. 25: Decorticated grain: length Ad. 26: Decorticated grain: width



Ad. 28: Endosperm: type

To be observed by reaction to KI-I solution; glutinous type endosperm is stained to reddish purple, non-glutinous type endosperm is stained to dark blue purple.

9. <u>Literature</u>

Fujioka S., 1994-99: The Grand Dictionary of Horticulture (volume 1-3), Shogakukan, Tokyo, JP, p1159

Ishida K., 1981: Hatomugi, Nosan Gyoson Bunka Kyokai (Nobunkyo), Tokyo, JP

Tetsuka T., Tajiri T., 2009: Tokusan Shubyo, Nihon Tokusan Nosakumotsu Shubyo Kyokai (Tokusan shubyo), Tokyo, JP, pp6-15

Osada T., 1989: Illustrated Grasses of Japan, Heibonsha, Tokyo, JP

10. <u>Technical Questionnaire</u>

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
	·	
		Application date: (not to be filled in by the applicant)
to be completed	TECHNICAL QUESTIO	NNAIRE ation for plant breeders' rights
Subject of the Technical Questic	nnaire	
1.1.1 Botanical name	Coix lacryma-jobi L. var. r (Syn. Coix ma-yuen Roma	ma-yuen (Rom. Caill.) Stapf an.)
1.1.2 Common name	Adlay	[]
2. Applicant		
Name		
Address		
Telephone No.		
Fax No.		
E-mail address		
Breeder (if different from applicant)		
Proposed denomination and bre	eder's reference	
Proposed denomination (if available)		
Breeder's reference		

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

[#] 4.	Information on the breeding scheme and propagation of the variety							
	4.1	Breed	ling sche	me				
		Variety	resulting	from:				
		4.1.1	Cross	sing				
			(a)	controlled cross (please state parent varies	ties)		[]	
		(female _l	parent)	Х	(male parent		.)
			(b)	partially known cross (please state known parer	nt variet	y(ies))	[]	
		(female)	х	(male parent		.)
			(c)	unknown cross			[]	
		4.1.2	Mutatior (please	n state parent variety)			[]	
		4.1.3	Discove (please	ry and development state where and when disco	vered a	nd 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.

TG/COIX(proj.3) Adlay, 2013-05-02 - 19 -

TECHNICAL OLICOTIONNAIDE	Dogo (v) of (v)	Deference Number
TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

(a) Self-pollination (b) Cross-pollination (i) population (ii) synthetic variety (c) Hybrid	[]
(c) Hybrid	r 1
(d) Other (please provide details)	[] []
(piease provide details)	

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

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 Variet	ies	Note
5.1 (5)	Plant: length		
	very short		1[]
	very short to short		2[]
	short Hatoyutaka		3[]
	short to medium		4[]
	medium Akishizuku		5[]
	medium to long		6[]
	long Okayamazairai		7[]
	long to very long		8[]
	very long		9[]
5.2 (7)	Culm: intensity of anthocyanin coloration		
	absent or very weak Okayamazairai		1[]
	very weak to weak		2[]
	weak Nakasatozairai		3[]
	weak to medium		4[]
	medium		5[]
	medium to strong		6[]
	strong		7[]
	long to very strong		8[]
	very strong		9[]
5.3 (16)	Stigma: presence of anthocyanin coloration		
	absent Hatojiro, Okayam	azairai	1[]
	present Akishizuku, Miya	gizairai	9[]

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

	Characteristics	Example Varieties	Note
5.4 (17)	Time of maturity		
	very early		1[]
	very early to early		2[]
	early	Hatojiro, Kuroishizairai	3[]
	early to medium		4[]
	medium	Akishizuku	5[]
	medium to late		6[]
	late	Okayamazairai	7[]
	late to very late		8[]
	very late		9[]
5.5 (22)	Grain: main color		
	white		1[]
	grey		2[]
	brown	Nakasatozairai	3[]
	dark brown	Okayamazairai	4[]
	black	Kuroishizairai	5[]

TG/COIX(proj.3) Adlay, 2013-05-02 - 22 -

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 similar variety(ies)	Describe the expression of the characteristic(s) for your candidate variety				
Example	Plant: length	short	medium				
Comments:							

TG/COIX(proj.3) Adlay, 2013-05-02 - 23 -

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

[#] 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 ma help to distinguish the variety?							
	Yes	[]		No	[[]		
	(If yes	, please pr	rovide details)					
7.2	Are th	ere any sp	pecial conditions for growi	ing the vari	ety	ety or conducting the examination?		
	Yes	[]		No	[[]		
	(If yes	, please pr	ovide details)					
7.3	Other	informatio	n					
8.	Autho	rization 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 obtai	ined?				
		Yes	[]	No	[[]		
	If the answer to (b) is yes, please attach a copy of the authorization.							

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

TG/COIX(proj.3) Adlay, 2013-05-02 - 24 -

TECHNICAL QUESTIONNAIRE			Page {x} of {y}	y} Reference Number:						
9. 9.1	·									
pests	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.									
has u	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, bad	cteria, phytoplasma)		Yes []	No []				
	(b)	Chemical treatment (e.g. growt	th retardant, pesticide)	Yes []	No []					
	(c)	Tissue culture			Yes []	No []				
	(d)	Other factors			Yes []	No []				
	Please provide details for where you have indicated "yes".									
10.	O. 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]