

**UPOV**

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

GENEVA

**DRAFT**

**ASPARAGUS-BEAN**

UPOV Code: VIGNA\_UNG\_SES

*Vigna unguiculata* subsp. *sesquipedalis* (L.)  
Verdc.

**GUIDELINES**

**FOR THE CONDUCT OF TESTS**

**FOR DISTINCTNESS, UNIFORMITY AND STABILITY**

*prepared by experts from Japan and the Netherlands*

*to be considered by the Enlarged Editorial Committee at its meeting  
to be held in Geneva, Switzerland, on January 8, 2009*

Alternative Names:\*

<i>Botanical name</i>	<i>English</i>	<i>French</i>	<i>German</i>	<i>Spanish</i>
<i>Vigna unguiculata</i> (L.) Walp. subsp. <i>sesquipedalis</i> (L.) Verdc.	Asparagus-bean, Pea-bean, Yard-long-bean, Chinese long-bean	Dolique asperge, Haricot asperge	Spargelbohne	Caupí, Judía espárrago, Judía de vaca

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.]

<u>TABLE OF CONTENTS</u>	<u>PAGE</u>
1. SUBJECT OF THESE TEST GUIDELINES.....	3
2. MATERIAL REQUIRED .....	3
3. METHOD OF EXAMINATION.....	3
3.1 Number of Growing Cycles .....	3
3.2 Testing Place .....	3
3.3 Conditions for Conducting the Examination.....	3
3.4 Test Design .....	4
3.5 Number of Plants / Parts of Plants to be Examined.....	4
3.6 Additional Tests .....	4
4. ASSESSMENT OF DISTINCTNESS, UNIFORMITY AND STABILITY .....	4
4.1 Distinctness .....	4
4.2 Uniformity.....	5
4.3 Stability .....	5
5. GROUPING OF VARIETIES AND ORGANIZATION OF THE GROWING TRIAL.....	5
6. INTRODUCTION TO THE TABLE OF CHARACTERISTICS .....	6
6.1 Categories of Characteristics.....	6
6.2 States of Expression and Corresponding Notes.....	6
6.3 Types of Expression .....	6
6.4 Example Varieties .....	6
6.5 Legend.....	6
7. TABLE OF CHARACTERISTICS/TABLEAU DES CARACTÈRES/MERKMALSTABELLE/TABLA DE CARACTERES.....	7
8. EXPLANATIONS ON THE TABLE OF CHARACTERISTICS .....	13
8.1 Explanations covering several characteristics .....	13
8.2 Explanations for individual characteristics .....	13
9. LITERATURE .....	16
10. TECHNICAL QUESTIONNAIRE.....	17

## 1. Subject of these Test Guidelines

These Test Guidelines apply to all varieties of *Vigna unguiculata* Walp. subsp. *sesquipedalis* (L.) Verdc.

## 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:

1,500 seeds.

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

### 3.4 *Test Design*

3.4.1 Each test should be designed to result in a total of at least 40 plants, which should be divided between two or more 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 *Number of Plants / Parts of Plants to be Examined*

Unless otherwise indicated, all observations should be made on 20 plants or parts taken from each of 20 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 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 40 plants, 2 off-types are allowed.

## 4.3 *Stability*

4.3.1 In practice, it is not usual to perform tests of stability that produce results as certain as those of the testing of distinctness and uniformity. However, experience has demonstrated that, for many types of variety, when a variety has been shown to be uniform, it can also be considered to be stable.

4.3.2 Where appropriate, or in cases of doubt, stability may be tested, either by growing a further generation, or by testing a new seed stock to ensure that it exhibits the same characteristics as those shown by the previous material supplied.

## 5. Grouping of Varieties and Organization of the Growing Trial

5.1 The selection of varieties of common knowledge to be grown in the trial with the candidate varieties and the way in which these varieties are divided into groups to facilitate the assessment of distinctness are aided by the use of grouping characteristics.

5.2 Grouping characteristics are those in which the documented states of expression, even where produced at different locations, can be used, either individually or in combination with other such characteristics: (a) to select varieties of common knowledge that can be excluded from the growing trial used for examination of distinctness; and (b) to organize the growing trial so that similar varieties are grouped together.

5.3 The following have been agreed as useful grouping characteristics:

- (a) Pod: length (characteristic 11)
- (b) Pod: anthocyanin coloration (characteristic 15)
- (c) Seed: main color (characteristic 22)
- (d) Seed: secondary color (characteristic 23)

5.4 Guidance for the use of grouping characteristics, in the process of examining distinctness, is provided through the General Introduction.

## 6. Introduction to the Table of Characteristics

### 6.1 *Categories of Characteristics*

#### 6.1.1 Standard Test Guidelines Characteristics

Standard Test Guidelines characteristics are those which are approved by UPOV for examination of DUS and from which members of the Union can select those suitable for their particular circumstances.

#### 6.1.2 Asterisked Characteristics

Asterisked characteristics (denoted by \*) are those included in the Test Guidelines which are important for the international harmonization of variety descriptions and should always be examined for DUS and included in the variety description by all members of the Union, except when the state of expression of a preceding characteristic or regional environmental conditions render this inappropriate.

### 6.2 *States of Expression and Corresponding Notes*

States of expression are given for each characteristic to define the characteristic and to harmonize descriptions. Each state of expression is allocated a corresponding numerical note for ease of recording of data and for the production and exchange of the description.

### 6.3 *Types of Expression*

An explanation of the types of expression of characteristics (qualitative, quantitative and pseudo-qualitative) is provided in the General Introduction.

### 6.4 *Example Varieties*

Where appropriate, example varieties are provided to clarify the states of expression of each characteristic.

### 6.5 *Legend*

(\*) Asterisked characteristic – see Chapter 6.1.2

QL: Qualitative characteristic – see Chapter 6.3

QN: Quantitative characteristic – see Chapter 6.3

PQ: Pseudo-qualitative characteristic – see Chapter 6.3

MG, MS, VG, VS: See Chapter 3.3.2

(a)-(c) 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. VG</b> (*)	<b>Seedling: anthocyanin coloration</b>	<b>Plantule : pigmentation anthocyanique</b>	<b>Keimpflanze: Anthocyanfärbung</b>	<b>Plántula: pigmentación antociánica</b>		
<b>QL</b>	absent	absente	fehlend	ausente	Kegon-no-taki	1
	present	présente	vorhanden	presente	Red nudle	9
<b>2. MG</b>	<b>Plant: number of branches (when fully developed)</b>	<b>Plante : nombre de ramifications (à plein développement)</b>	<b>Pflanze: Anzahl Verzweigungen (bei voller Entwicklung)</b>	<b>Planta: número de ramificaciones (en completo desarrollo)</b>		
<b>QN</b>	(a) few	petit	gering	pequeño	Akamitori	3
	medium	moyen	mittel	medio	Kegon-no-taki	5
	many	grand	groß	grande		7
<b>3. VG/ MG</b> (+)	<b>Plant: length of main stem</b>	<b>Plante : longueur de la tige principale</b>	<b>Pflanze. Länge des Haupttriebs</b>	<b>Planta: longitud del tallo</b>		
<b>QN</b>	(a) short	courte	kurz	corto	Hime-16	3
	medium	moyenne	mittel	medio	Kurodane-sanjaku	5
	long	longue	lang	largo	Kegon-no-taki	7
<b>4. VG</b>	<b>Leaf blade: intensity of green color</b>	<b>Limbe : intensité de la couleur verte</b>	<b>Blattspreite: Intensität der Grünfärbung</b>	<b>Limbo: intensidad del color verde</b>		
<b>QN</b>	(a) light	claire	hell	claro	Kurodane-16	3
	medium	moyenne	mittel	medio	Kegon-no-taki	5
	dark	foncée	dunkel	oscuro	Kurodane-sanjaku	7
<b>5. VG/ MG</b> (+)	<b>Leaf blade: length of terminal leaflet</b>	<b>Limbe : longueur de la foliole terminale</b>	<b>Blattspreite: Länge der Endfieder</b>	<b>Limbo: longitud del foliolo terminales</b>		
<b>QN</b>	(a) short	courte	kurz	corto	Pekin-sanjaku	3
	medium	moyenne	mittel	medio	Hime-16	5
	long	longue	lang	largo	Shin-shoka	7

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
<b>6.</b>	<b>VG/ MG</b>	<b>Leaf blade: width of terminal leaflet</b>	<b>Limbe : largeur de la foliole terminale</b>	<b>Blattspreite: Breite der Endfieder</b>	<b>Limbo: anchura del foliolo terminal</b>	
(+)						
<b>QN</b>	<b>(a)</b>	narrow	étroite	schmal	estrecho	Akamitori 3
		medium	moyenne	mittel	medio	Kurodane-sanjaku 5
		broad	large	breit	ancho	S6045 7
<b>7.</b>	<b>VG/ MS</b>	<b>Petiole: length</b>	<b>Pétiole : longueur</b>	<b>Blattstiel: Länge</b>	<b>Pecíolo: longitud</b>	
(+)						
<b>QN</b>	<b>(a)</b>	short	court	kurz	corto	Kurodane-16 3
		medium	moyen	mittel	medio	Pekin-sannjaku 5
		long	long	lang	largo	7
<b>8.</b>	<b>VG</b>	<b>Flower bud: color</b>	<b>Bouton floral : couleur</b>	<b>Blütenknospe: Farbe</b>	<b>Botón floral: color</b>	
<b>PQ</b>		yellowish	jaunâtre	gelblich	amarillento	1
		light green	vert clair	hellgrün	verde claro	2
		medium green	vert moyen	mittelgrün	verde medio	3
<b>9.</b>	<b>MG</b>	<b>Time of first flowering</b>	<b>Époque de première floraison</b>	<b>Zeitpunkt des ersten Blütenflors</b>	<b>Época de la primera floración</b>	
(*)						
(+)						
<b>QN</b>	<b>(a)</b>	early	précoce	früh	temprana	Kurodane-sanjaku 3
		medium	moyenne	mittel	media	Akadane-aosaya- sanjaku 5
		late	tardive	spät	tardía	Nishakuhan-sirosaya 7
<b>10.</b>	<b>VG</b>	<b>Flower: color</b>	<b>Fleur : couleur</b>	<b>Blüte: Farbe</b>	<b>Flor: color</b>	
(*)						
<b>PQ</b>	<b>(a)</b>	white	blanc	weiß	blanco	Nishakuhan-sirosaya 1
		light reddish purple	pourpre rougeâtre clair	hell rötlichpurpurn	púrpura rojizo claro	Kurodane-sanjaku 2
		medium reddish purple	pourpre rougeâtre moyen	mittel rötlichpurpurn	púrpura rojizo medio	Kegon-no-taki 3
		purple	pourpre	purpurn	púrpura	Akamitori 4



	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
<b>11.</b>	<b>VG/ Pod: length</b>	<b>Gousse : longueur</b>	<b>Hülse: Länge</b>	<b>Vaina: longitud</b>		
<b>(*)</b>	<b>MG</b>					
<b>(+)</b>						
<b>QN</b>	<b>(b)</b> short	courte	kurz	corta	Hime-16	3
	medium	moyenne	mittel	media	Kegon-no-taki	5
	long	longue	lang	larga	Orient Wonder	7
<b>12.</b>	<b>VG/ Pod: width</b>	<b>Gousse : largeur</b>	<b>Hülse: Breite</b>	<b>Vaina: anchura</b>		
<b>(*)</b>	<b>MG</b>					
<b>(+)</b>						
<b>QN</b>	<b>(b)</b> narrow	étroite	schmal	estrecha		3
	medium	moyenne	mittel	media	Kegon-no-taki	5
	broad	large	breit	ancha	Shin-shoka	7
<b>13.</b>	<b>VG Pod: twisting</b>	<b>Gousse : torsion</b>	<b>Hülse: Verdrehung</b>	<b>Vaina: torsión</b>		
<b>(*)</b>						
<b>(+)</b>						
<b>QL</b>	<b>(b)</b> absent	absente	fehlend	ausente	Akamitori	1
	present	présente	vorhanden	presente	Kegon-no-taki	9
<b>14.</b>	<b>VG Pod: texture of surface</b>	<b>Gousse : texture de la surface</b>	<b>Hülse: Textur der Oberfläche</b>	<b>Vaina: textura de la superficie</b>		
<b>QN</b>	<b>(b)</b> smooth	lisse	glatt	lisa	Akamitori	1
	medium	moyenne	mittel	media	Akadane-aosaya-16	2
	rough	rugueuse	rauh	rugosa	Kegon-no-taki	3
<b>15.</b>	<b>VG Pod: anthocyanin coloration</b>	<b>Gousse : pigmentation anthocyanique</b>	<b>Hülse: Anthocyanfärbung</b>	<b>Vaina: pigmentación antociánica</b>		
<b>(*)</b>						
<b>QL</b>	<b>(b)</b> absent	absente	fehlend	ausente	Orient Wonder	1
	present	présente	vorhanden	presente	Red Noodle	9

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
<b>16. VG</b>	<b><u>Only varieties with Pod: anthocyanin coloration absent:</u> Pod: intensity of green color</b>	<b><u>Seulement variétés à gousse :</u> <u>pigmentation anthocyanique</u> <u>absente</u> : Gousse : <u>intensité de la couleur verte</u></b>	<b><u>Nur Sorten mit Hülse:</u> <u>Anthocyanfärbung</u> <u>fehlend:</u> Hülse: <u>Intensität der Grünfärbung</u></b>	<b><u>Sólo variedades con vaina: pigmentación antociánica ausente:</u> Vaina: intensidad del color verde</b>		
<b>QN (b)</b>	light	claire	hell	claro	Kurodane-16	3
	medium	moyenne	mittel	medio	Akamitori	5
	dark	foncée	dunkel	oscuro	Kegon-no-taki	7
<b>17. VG</b>	<b><u>Only varieties with Pod: anthocyanin coloration present:</u> Pod: intensity of anthocyanin coloration</b>	<b><u>Seulement variétés à gousse :</u> <u>pigmentation anthocyanique</u> <u>présente</u> : Gousse : <u>intensité de la pigmentation anthocyanique</u></b>	<b><u>Nur Sorten mit Hülse:</u> <u>Anthocyanfärbung</u> <u>vorhanden:</u> Hülse: <u>Intensität der Anthocyanfärbung</u></b>	<b><u>Sólo variedades con vaina: pigmentación antociánica presente:</u> Vaina: <u>intensidad de la pigmentación antociánica</u></b>		
<b>QN (b)</b>	absent or very weak	absente ou très faible	fehlend oder sehr gering	ausente o muy débil	Kegon-no-taki	1
	weak	faible	gering	débil		3
	medium	moyenne	mittel	media	Akamitori	5
	strong	forte	stark	fuerte	Tsu In	7
<b>18. VG/ MG (+)</b>	<b>Pedicele: length</b>	<b>Pédicelle : longueur</b>	<b>Blütenstiel: Länge</b>	<b>Pedicele: longitud</b>		
<b>QN</b>	short	court	kurz	corto	Hong-jiang-dou	3
	medium	moyen	mittel	medio	Ying-jiang-dou No.1	5
	long	long	lang	largo	Fei 7	7
<b>19. VG/ MG (*) (+)</b>	<b>Seed: length</b>	<b>Graine : longueur</b>	<b>Samen: Länge</b>	<b>Semilla: longitud</b>		
<b>QN (c)</b>	short	courte	kurz	corta	Kegon-no-taki	3
	medium	moyenne	mittel	media	Akamitori	5
	long	longue	lang	larga		7

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
<b>20.</b>	<b>VG/ MG</b>	<b>Seed: width</b>	<b>Graine : largeur</b>	<b>Samen: Breite</b>	<b>Semilla: anchura</b>	
(+)						
<b>QN</b>	(c)	narrow	étroite	schmal	estrecha	3
		medium	moyenne	mittel	media	Kegon-no-taki 5
		broad	large	breit	ancha	Akamitori 7
<b>21.</b>	<b>VG</b>	<b>Seed: shape</b>	<b>Graine : forme</b>	<b>Samen: Form</b>	<b>Semilla: forma</b>	
(*)						
(+)						
<b>PQ</b>	(c)	elliptic	elliptique	elliptisch	elíptica	Akamitori 1
		kidney-shaped	rénilorme	nierenförmig	reniforme	Hime-juroku 2
		curved	courbée	gebogen	curvada	3
<b>22.</b>	<b>VG</b>	<b>Seed: main color</b>	<b>Graine : couleur principale</b>	<b>Samen: Hauptfarbe</b>	<b>Semilla: color principal</b>	
(*)						
(+)						
<b>PQ</b>	(c)	white	blanc	weiß	blanco	Nishakuhan-shirosaya 1
		light yellow	jaune clair	hellgelb	amarillo claro	2
		brown	brun	braun	marrón	Kegon-no-taki 3
		reddish brown	brun rougeâtre	rötlichbraun	marrón rojizo	Akamitori, Orient Wonder 4
		purplish brown	brun pourpre	purpurbraun	marrón púrpura	5
		black	noir	schwarz	negro	Kurojuroku 6
<b>23.</b>	<b>VG</b>	<b>Seed: secondary color</b>	<b>Graine : couleur secondaire</b>	<b>Samen: Sekundärfarbe</b>	<b>Semilla: color secundario</b>	
(*)						
<b>QL</b>	(c)	absent	absente	fehlend	ausente	1
		present	présente	vorhanden	presente	9

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
<b>24.</b>	<b>VG</b>	<b>Seed: secondary color</b>	<b>Graine : couleur secondaire</b>	<b>Samen: Sekundärfarbe</b>	<b>Semilla: color secundario</b>	
<b>PQ</b>	<b>(c)</b>	brown	brun	braun	marrón	Nishakuhan-shirosaya 1
		reddish brown	brun rougeâtre	rötlichbraun	marrón rojizo	Kegon-no-taki 2
		purplish brown	brun pourpre	purpurbraun	marrón púrpura	3
		black	noir	schwarz	negro	Unnanaosaya-2shaku 4
<b>25.</b>	<b>VG</b>	<b>Seed: pattern of secondary color</b>	<b>Graine : distribution de la couleur secondaire</b>	<b>Samen: Verteilung der Sekundärfarbe</b>	<b>Semilla: distribución del color secundario</b>	
<b>PQ</b>	<b>(c)</b>	around corona	en couronne	um die Nebenkronen	en torno a la corona	1
		in veins	dans les nervures	in den Adern	en los nervios	Kegon-no-taki 2
		mottled on part of seed	tachetée sur une partie de la graine	an einem Teil der Samen gepunktet	jaspeado en parte de la semilla	Nishakuhan-shirosaya 3
		mottled on whole seed	tachetée sur toute la graine	am ganzen Samen gepunktet	jaspeado en toda la semilla	4

8. Explanations on the Table of Characteristics

8.1 *Explanations covering several characteristics*

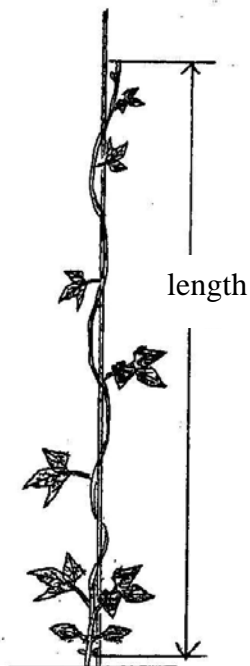
Characteristics containing the following key in the second column of the Table of Characteristics should be examined as indicated below:

- (a) Plant, leaf, petiole, time of flowering: should be observed at the first flowering (50% of the plants with at least one flower).
- (b) Pod: all observations on the pod should be made at the time of fresh market maturity (swelling of the ovules and slight swelling of the pod wall).
- (c) Seed: all observations on the seed should be made on fully developed and dry seed.

8.2 *Explanations for individual characteristics*

Ad. 3: Plant: length of main stem

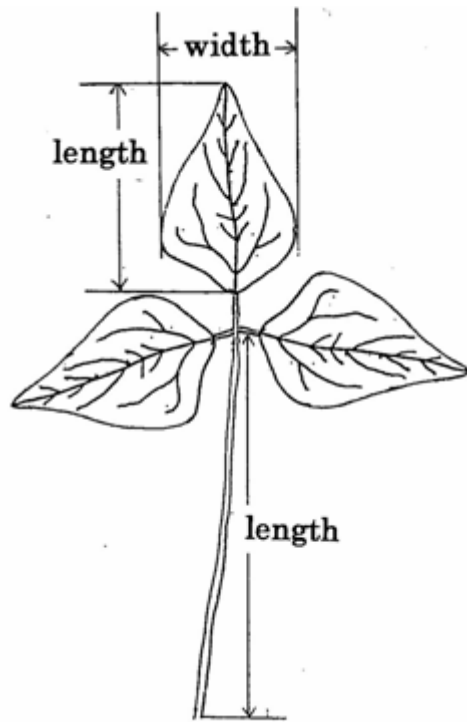
The length of the main stem is observed from the node of the cotyledon to the top of the plant at first flowering.



Ad. 5: Leaf blade: length of terminal leaflet

Ad. 6: Leaf blade: width of terminal leaflet

Ad. 7: Petiole: length



Ad. 9: Time of first flowering

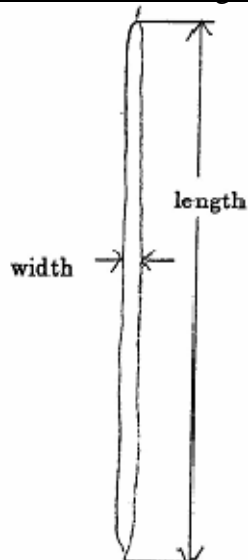
The time of first flowering is when the first flower is open on 50% of plants.

Ad. 11: Pod: length

Ad. 12: Pod: width

Ad. 13: Pod: twisting

Ad. 11 and 12: Pod: length, width

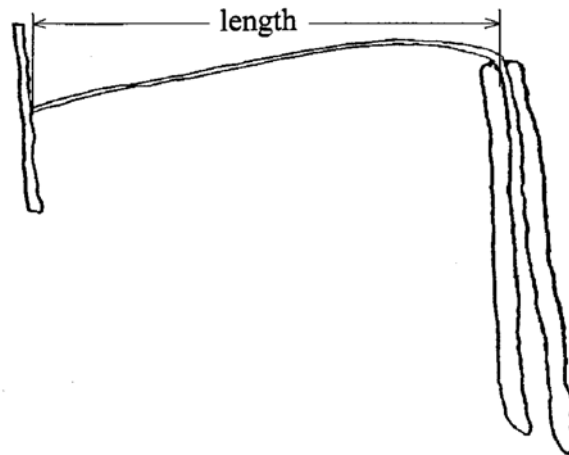


Ad. 13: Pod: twisting



1 absent 9 present

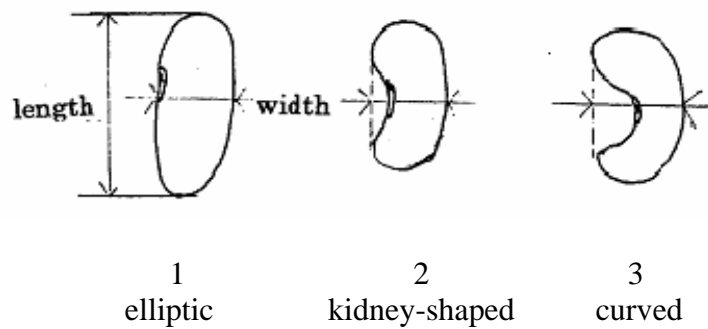
Ad. 18: Pedicel: length



Ad. 19: Seed: length

Ad. 20: Seed: width

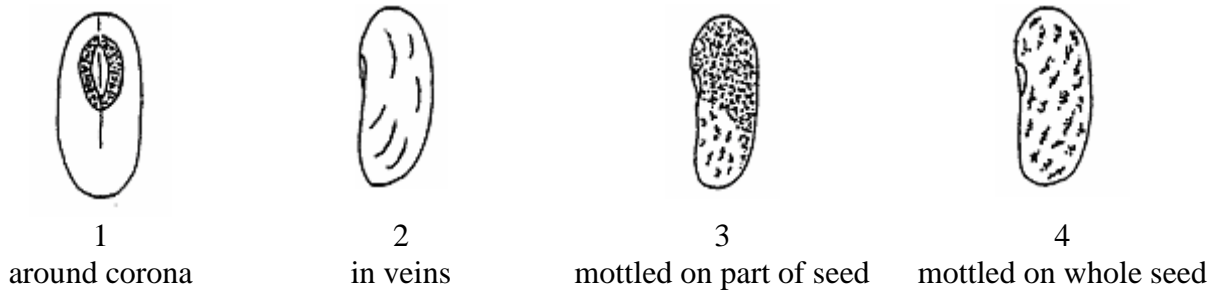
Ad. 21: Seed: shape



Ad. 22: Seed: main color

Main color: color of the largest area of the seed.

Ad. 25: Seed: pattern of secondary color



9. Literature

Larkom, J., 1991: Yard long bean, Oriental Vegetables. 62-63, Jon Murry, GB.

Ministry of Agriculture, Forestry & Fisheries, 1981: National Test Guideline for Sasage. JP.

Nawata, E.,1991: Vigna L., The Grand Dictionary of Horticulture. Vol. 2. 353, Shougakkan, JP.

Phillips,R., Rix, M., 1993: Cowpea and Asparagus bean. Vegetables 104-105, Pan Books, GB.



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="Vigna unguiculata (L) Walp. subsp. sesquipedalis (L.) Verdc."/>	
1.2 Common name	<input type="text" value="Asparagus-bean"/>	
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 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) Other  [ ]  
(please provide details)

4.2.2 Vegetative propagation  [ ]

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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:
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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 Pod: length (11)</b>		
short	Hime-16	3[ ]
medium	Kegon-no-taki	5[ ]
long	Orient Wonder	7[ ]
<b>5.2 Pod: anthocyanin coloration (15)</b>		
absent	Orient Wonder	1[ ]
present	Red Noodle	9[ ]
<b>5.3 Seed: main color (22)</b>		
white	Nishakuhan-shirosaya	1[ ]
light yellow		2[ ]
brown	Kegon-no-taki	3[ ]
reddish brown	Akamitori, Orient Wonder	4[ ]
purplish brown		5[ ]
black	Kurojuroku	6[ ]
<b>5.4 Seed: secondary color (23)</b>		
absent		1[ ]
present		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>Pod: length</i>	<i>medium</i>	<i>medium-long</i>

Comments:

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

7.3.1 Main use

(a) fresh market (pod) [ ]

(b) dryseed [ ]

(c) other [ ]

(please provide details)

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.

# 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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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]