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

<p><b>WHITE LUPIN</b> * (<i>Lupinus albus</i> L.),</p> <p><b>NARROW LEAF LUPIN/ BLUE LUPIN</b> (<i>Lupinus angustifolius</i> L.) and</p> <p><b>YELLOW LUPIN</b> (<i>Lupinus luteus</i> L).*</p>
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**GUIDELINES**

**FOR THE CONDUCT OF TESTS**

**FOR DISTINCTNESS, UNIFORMITY AND STABILITY**

Alternative Names: \*

Latin	English	French	German	Spanish
<i>Lupinus albus</i> L.	White Lupin	Lupin blanc	Weißlupine	Altramuz blanco
<i>Lupinus angustifolius</i> L.	Narrow Leaf Lupin/Blue Lupin	Lupin bleu	Blaue Lupine	Altramuz azul
<i>Lupinus luteus</i> L.	Yellow Lupin	Lupin jaune	Gelbe Lupine	Altramuz amarillo

**ASSOCIATED DOCUMENTS**

These guidelines should be read in conjunction with document TG/1/3, "General Introduction to the Examination of Distinctness, Uniformity and Stability and the Development of Harmonized Descriptions of New Varieties of Plants" (hereinafter referred to as 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 Guidelines

1.1 These Test Guidelines apply to all varieties of *Lupinus albus* L., *Lupinus angustifolius* L. and *Lupinus luteus* L.

## 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:

2,5kg

2.4 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.

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

2.6 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 *Duration of Tests*

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

### 3.2 *Testing Place*

The tests should normally be conducted at one place. If any characteristics of the variety, which are relevant for the examination of DUS, cannot be seen at that place, the variety may be tested at an additional place.

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

Grain: All observations on the grain should be made on grain of fully mature pods harvested from the plots, unless otherwise indicated.

3.3.3 Type of observation

The recommended method of observing the characteristic is indicated by the following key in the second column of the Table of Characteristics:

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 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.

3.4.2 Each test should be designed to result in a total of, at least 200 plants, which should be divided between two or more replicates.

3.5 *Number of Plants/Parts of Plants to be Examined*

Unless otherwise indicated, all observations on single plants should be made on 30 plants or part taken from each of 30 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 minimum duration of tests recommended in section 3.1 reflects, in general, the need to ensure that any differences in a characteristic are sufficiently consistent.

#### 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 200 plants, 5 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 materials applied.

### 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 is aided by the use of grouping characteristics.

5.2 Grouping characteristics are those in which the documented states of expression, even where reproduced at different locations, can be used, either individually or in combination with others 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 trials so that similar varieties are grouped together.

5.3 The following have been agreed as useful grouping characteristics:

- (a) Grain: bitter principle (characteristic 1)
- (b) Flower: color of wings (characteristic 10)
- (c) Plant: growth type (characteristic 12)

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*

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

6.4.2 Species of example varieties:

Lal: *Lupinus albus*

Lan: *Lupinus angustifolius*

Llu: *Lupinus luteus*

### 6.5 *Legend*

(\*) Asterisked characteristic –see Section 6.1.2

(+) See Explanations on the Table of Characteristics in Chapter 8.

MS }  
VG } Type of observation –see Section 3.3.3  
VS }  
C }

7. TableofCharacteristics/Tableauescaractères/Merkmalstabelle/Tabladecaracteres

Char. No.	Method of Examination	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
1. (* (+)	C VS	<b>Grain:bitter principle</b>	<b>Grain:amertume</b>	<b>Korn:Bitterstoff</b>	<b>Grano:amargor</b>		
		absent	absente	fehlend	ausente	Nelly(Lal), Bordako(Lan), Borselfa(Llu)	1
		present	présente	vorhanden	presente	Feli(Lal), Azuro(Lan), Trebisa(Llu)	9
2. (+)	VG	<b>Plant:heightat vegetativestage</b>	<b>Plante:hauteurau stadevégétatif</b>	<b>Pflanze:Höheim vegetativenSta - dium</b>	<b>Planta:alturaen estadovegetativo</b>		
		short	courte	niedrig	baja		3
		medium	moyenne	mittel	media	Minori(Lal), Azuro(Lan), Borselfa(Llu)	5
		tall	haute	hoch	alta	Evita(Lal)	7
3. (* (+)	VG	<b>Leaf:green color priortobud emergence</b>	<b>Feuille:couleur verteavant l'émergencedu bourgeon</b>	<b>Blatt:Grünfärbung vordemErscheinen derKnospe</b>	<b>Hoja:colorverde antesdela emergenciadela yema</b>		
		light	claire	hell	claro	Rubine (Lan)	3
		medium	moyenne	mittel	medio	Nelly(Lal), Bordako(Lan), Juno(Llu)	5
		dark	foncée	dunkel	oscuro	Sonet(Lan)	7

Char. No.	Method of Examination	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
4. (*)	VG	<b>Stem:anthocyanin coloration prior to bud emergence</b>	<b>Tige:pigmentation anthocyanique avant l'émergence du bourgeon</b>	<b>Trieb: Anthocyanfärbung vor dem Erscheinender Knospe</b>	<b>Tallo: pigmentación antocianica antes de la emergencia de la yema</b>		
		absent or very weak	absente ou très faible	fehlend oder sehr gering	ausente o muy débil	Minori(Lal), Bolivio(Lan),	1
		weak	faible	gering	débil	Juno(Llu)	3
		medium	moyenne	mittel	media	Nelly(Lal), Boltensia(Lan)	5
		strong	forte	stark	fuerte	Sonet(Lan)	7
very strong	très forte	sehr stark	muy fuerte		9		
5. (*)	MG	<b>Plant:height at beginning of flowering</b>	<b>Plante:hauteur au début de la floraison</b>	<b>Pflanze:Höhe bei Blühbeginn</b>	<b>Planta:altura al comienzo de la floración</b>		
		short	basse	niedrig	corta	Minori(Lal)	3
		medium	moyenne	mittel	media	Nelly(Lal), Bolivio(Lan), Juno(Llu)	5
tall	haute	hoch	alta	Rubine(Lan)	7		
6.	MG	<b>Plant:height of insertion of first inflorescence at green ripening (from ground level to insertion of 1<sup>st</sup> inflorescence)</b>	<b>Plante:hauteur de l'insertion de la première inflorescence au stade de la maturité en vert (du niveau du sol à l'insertion de la première inflorescence)</b>	<b>Pflanze:Höhe am Ansatz des ersten Blütenstands bei Grünreife (vom Boden bis zum Ansatz des ersten Blütenstands)</b>	<b>Planta:altura de inserción de la primera inflorescencia en madurez verde (a partir del suelo hasta la inserción de la primera inflorescencia)</b>		
		very low	très faible	sehr gering	muy bajo	Borweta(Lan)	1
		low	faible	gering	bajo	Nelly(Lal), Borselja(Llu)	3
		medium	moyenne	mittel	medio	Boruta(Lan), Borsaja(Llu)	5
		high	forte	stark	alto	Bordako(Lan), Borna(Llu)	7
very high	très forte	sehr stark	muy alto		9		



Char. No.	Method of Examination	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
<b>7.</b> (*) (+)	<b>MG</b>	<b>Plant:height at green ripening stage</b>	<b>Plante:hauteur au stade de la maturité en vert</b>	<b>Pflanze:Höhe bei Grünreife</b>	<b>Planta:altura al estado de la madurez verde</b>		
		very short	très basse	sehr niedrig	muy baja		1
		short	basse	niedrig	baja	Bardo(Lal), Borweta(Lan), Borselva(Llu)	3
		medium	moyenne	mittel	media	Nelly(Lal), Rubine(Lan), Borsaja(Llu)	5
		tall	haute	hoch	alta	Bordako(Lan), Trebisa(Llu)	7
		very tall	très haute	sehr hoch	muy alta		9
<b>8.</b> (*) (+)	<b>MS</b>	<b>Central leaflet: length</b>	<b>Foliole médiane: longueur</b>	<b>Mittleres Fiederblatt:Länge</b>	<b>Folío central: longitud</b>		
		very short	très courte	sehr kurz	muy corta		1
		short	courte	kurz	corta	Bolivio(Lan)	3
		medium	moyenne	mittel	media	Minori(Lal), Bordako(Lan), Juno(Llu)	5
		long	longue	lang	larga	Nelly(Lal), Sonet(Lan), Teo(Llu)	7
		very long	très longue	sehr lang	muy larga		9

Char. No.	Method of Examination	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
<b>9.</b> (+)	<b>MS</b>	<b>Central leaflet: width</b>	<b>Foliole médiane: largeur</b>	<b>Mittleres Fiederblatt: Breite</b>	<b>Folío central: anchura</b>		
		very narrow	très étroite	sehr schmal	muy estrecho		1
		narrow	étroite	schmal	estrecho	Bolivia(Lan)	3
		medium	moyenne	mittel	medio	Minori(Lal), Borweta(Lan), Juno(Llu)	5
		broad	large	breit	ancho	Nelly(Lal), Markiz(L lu)	7
	very broad	très large	sehr breit	muy ancho		9	
<b>10.</b> (* (+)	<b>VG</b>	<b>Flower: color of wings</b>	<b>Fleur: couleur des ailes</b>	<b>Blüte: Färbung des Flügels</b>	<b>Flor: color de las alas</b>		
		white	blanche	weiß	blanco	Minori(Lal)	1
		bluish white	blanc bleuâtre	bläulich weiß	blanco azulado	Nelly(Lal)	2
		blue	bleue	blau	azul	Azuro(Lan)	3
		violet	violette	violett	violeta	Bordako(Lan)	4
		pink	rose	rosa	rosa	Rubine(Lan)	5
		light yellow	jaune clair	hellgelb	amarillo claro	Teo(Llu)	6
dark yellow	jaune foncé	dunkelgelb	amarillo oscuro	Juno(Llu)	7		
<b>11.</b> (* (+)	<b>VG</b>	<b>Flower: color of tip of carina</b>	<b>Flower: couleur de l'extrémité de la carène</b>	<b>Blüte: Farbe der Schiffchenspitze</b>	<b>Flor: color de la punta de la carina</b>		
		yellow	jaune	gelb	amarillo	Minori(Lal), Bordako(Lan)	1
	blue black	noir-bleu	blauschwarz	negra-azul	Nelly(Lal), Azuro(Lan), Juno(Llu)	2	

Char. No.	Method of Examination	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
12. (* (+)	VG	<b>Plant: growth type</b>	<b>Plante: type de croissance</b>	<b>Pflanze: Wuchstyp</b>	<b>Planta: hábito de crecimiento</b>		
		determinate	déterminé	begrenzt wachsend	determinado	Borweta(Lan), Borselva(Llu)	1
		indeterminate	indéterminé	unbegrenzt wachsend	indeterminado	Nelly(Lal), Azuro(Lan), Juno(Llu)	2
13. (+)	MS	<b>Pod: length</b>	<b>Gousse: longueur</b>	<b>Hülse: Breite</b>	<b>Vaina: longitud</b>		
		short	courte	kurz	corta	Borweta(Lan)	3
		medium	moyenne	mittel	media	Minori(Lal), Borlana(Lan), Juno(Llu)	5
		long	longue	lang	larga	Nelly(Lal), Bolivio(Lan)	7
14. (* (+)	VS	<b>Grain: ornamentation</b>	<b>Graine: ornements</b>	<b>Korn: Ornamentierung</b>	<b>Semilla: decoración</b>		
		absent	absentes	fehlend	ausente	Nelly(Lal), Bordako(Lan), Teo(Llu)	1
		present	présentes	vorhanden	presente	Azuro(Lan), Juno(Llu)	9
15. (+)	VS	<b>Grain: color of ornamentation</b>	<b>Graine: couleur des ornements</b>	<b>Korn: Färbung der Ornamentierung</b>	<b>Semilla: color de la decoración</b>		
		beige	beige	beige	beige	Borlu(Lan)	1
		brown	brune	braun	marrón	Bolivia(Lan)	2
		grey	grise	grau	gris		3
		black	noire	schwarz	negro	Juno(Llu)	4
		multicolored	multicolore	mehrfarbig	multicolor	Azuro(Lan)	5

Char. No.	Method of Examination	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
16.	VS	<b>Grain:dis tribution ofornamentation</b>	<b>Semence: distributiondes ornements</b>	<b>Korn:Verteilung der Ornamentierung</b>	<b>Semilla: distribuciónde la decoración</b>		
(+)		total	complète	gesamt	completa	Azuro(Lan)	1
		totalwitheyebrow	complèteavec auréole	gesamtmitAureole	completaconhalo	Borena(Llu)	2
		dorsal	dorsale	dorsal	dorsal	Markiz(Llu)	3
		ventral	ventrale	ventral	ventral		4
		eyebrowonly	auréoleseulement	nurAureole	halosolamente		5
17.	VS	<b><u>Excludingvarieties withgrain: distributionof ornamentation: eyebrowonly : Grain:densityof ornamentation</u></b>	<b><u>Al'exclusiondes variétésavec semences: distributiondes ornements: auréoleseulement : Semence:densité desornements</u></b>	<b><u>SortenmitKorn ausgenommen: Verteilungder Ornamentierung: NurAureole :Korn: Dichteder Ornamentierung</u></b>	<b><u>Excluyendosololas variedadescon semilla: distribuciónde la decoración:halo solamente:Semilla: densidadde la decoración</u></b>		
(+)		verysparse	très lâche	sehrlocker	muylaxa		1
		sparse	lâche	locker	laxa	Boruta(Lan)	2
		medium	moyenne	mittel	media	Bolivio(Lan), Juno(Llu)	3
		dense	dense	dicht	densa	Sonet(Lan), Borena(Llu)	4
		verydense	très dense	sehrdicht	muydensa	Rubine(Lan), Trebisa(Llu)	5

Char. No.	Method of Examination	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
18.	MG	<b>Grain:100seed weight(harvested seed)</b>	<b>Semence:poidsde 100grains(grains récoltés)</b>	<b>Samen:Gewicht von100Samen (geerntetSamen)</b>	<b>Semilla:pesode 100semillas (semillacosechada)</b>		
		verylow	trèspetit	sehrniedrig	muypequeño		1
		low	petit	niedrig	pequeño	Bardo(Lal), Borweta(Lan)	3
		medium	moyen	mittel	medio	Nelly(Lal), Bordako(Lan), Juno(Llu)	5
		high	grand	hoch	grande	Bolivio(Lan)	7
		veryhigh	trèsgrand	sehrhoch	muygrande		9
19. (* (+)	VS VG	<b>Timeofflowering</b>	<b>Époque de floraison</b>	<b>ZeitpunktderBlüte</b>	<b>Épocadela floración</b>		
		early	précoce	früh	precoz	Nelly(Lal), Markiz(Llu)	3
		medium	moyenne	mittel	medio	Bordako(Lan), Juno(Llu)	5
		late	tardive	spät	tardía	Boruta(Lan), Bornal(Llu)	7
20. (+)	VG	<b>Timeofgreen ripening</b>	<b>Époquedematurité envert</b>	<b>Zeitpunktder Grünreife</b>	<b>Épocaalestadode lamadurezverde</b>		
		early	précoce	früh	precoz	Borweta(Lan)	3
		medium	moyenne	mittel	medio	Bardo(Lal), Bora(Lan), Borena(Llu)	5
		late	tardive	spät	tardía	Nelly(Lal), Azuro(Lan)	7

Char. No.	Method of Examination	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
<b>21.</b>	<b>VG</b>	<b>Time of ripening</b>	<b>Époque de maturité</b>	<b>Zeitpunkt der Vollreife</b>	<b>Época de la madurez</b>		
(+)		early	précoce	früh	precoz	Bardo(Lal), Borweta(Lan)	3
		medium	moyenne	mittel	medio	Nelly(Lal), Bora(Lan), Borena(Llu)	5
		late	tardive	spät	tardía	Azuro(Lan)	7

8. Explanations on the Table of Characteristics

Ad.1: Grain: bitter principle

The bitter principle should be assessed on the seed submitted by the applicant. The Grain-Cut-Method according to v. Sengbusch (1942), Ivanov and Smirnova (1932) and Eggebrecht (1949) is applicable as the testing method to *Lupinus albus*, *Lupinus angustifolius* and *Lupinus luteus*. The dry or swollen grains are cut transversely. The grain halves are placed on a sieve, dipped in an iodine solution for 10 seconds and then rinsed with water for 5 seconds. The cut surfaces of bitter grains discolor to brown but those of non-bitter grains remain yellow.

For the preparation of the iodine solution 14 g potassium iodate are dissolved in a little water as possible, then 10 g iodine is added and should be made up to 100 cm<sup>3</sup> with water. The solution must be left for one week before it can be used. Storage should be in brown bottles. This main solution is diluted between 1 to 3 and 1 to 5 before being used.

Ad.2: Plant: height at vegetative stage

To be observed on the whole trial before bud emergence of the earliest variety.

Ad.7&20: Plant: height at green ripening stage (7) and Time of green ripening (20)

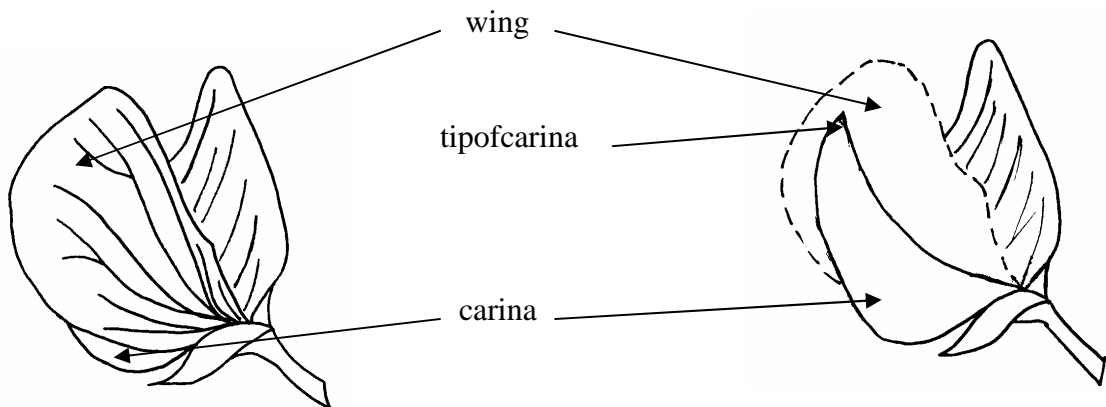
The time of green ripening is when the grains in the pods of the main shoot have reached full size and the grains in the pod can be dented with the thumbnail.

Ads.8,9: Central leaflet: length and width

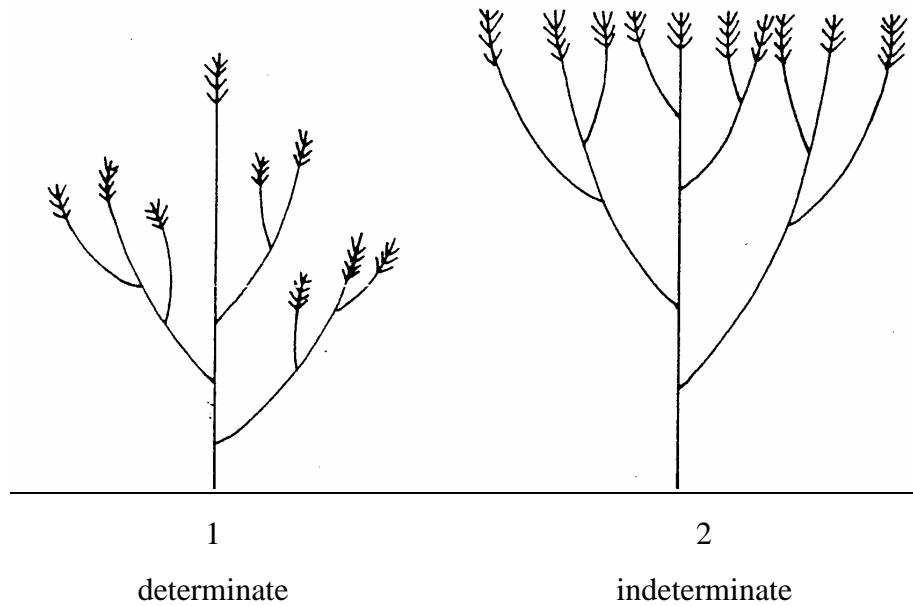
All observations on the leaf should be made at the time of full flowering on the central leaflet of the leaf just below the uppermost branch which is bearing flowers.

Ads.10,11: Flower: color of wing and Flower: color of tip of carina

All observations on the flower should be made at the time of full flowering. Observations should be made on the middle of the inflorescence on flowers at the stage of pollen release.



Ad.12:Plant:growthtype



Determinate: In the case of determinate growth types, lateral stem development is very weak, resulting in the main stem being prominently visible.

Indeterminate: In the case of indeterminate growth types lateral stem development is strong resulting in the lateral shoots growing to a similar height as the main stem resulting in no prominent main stem.

Ad.13:Pod:length

All observations should be made on pods at green maturity, in the middle third of the main inflorescence.

Ads.14 and 15: Grain: ornamentation (14) and Grain: color of ornamentation (15)

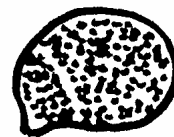
Ornamentation means well -defined dots different from the ground color. They should be assessed at full maturity of the grain.



Ad.16: Grain: distribution of ornamentation



1  
total



2  
total with eyebrow



3  
dorsal

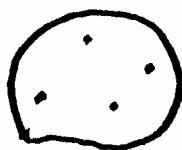


4  
ventral



5  
eyebrow only

Ad.17: Grain: density of ornamentation



1  
very sparse



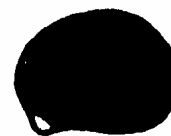
3  
sparse



5  
medium



7  
dense



9  
very dense

Ad.19:Timeofflowering

A plant is considered to begin to flower when 3 flowers of the inflorescence on the main shoot have opened. If observations are made on individual plants, the mean date for the plot should be calculated. If observations are made on a group of plants, the date of flowering is when the flower buds on the main shoot of about 50% of the plants in the plot have begun to open.

Ad.21:Timeofripening

The time of ripening is when the grains in the pods of the main shoot can no longer be dented with the thumbnail.

9. Literature

– Eggebrecht, H.: Methodenbuch Band V. Die Untersuchung von Saatgut, Radebeul und Berlin. 1949.

– IBPGR Secretariat: Lupin Descriptor, Rome 1981.

– Julier, B.: Etude génétique et physiologique de l'architecture déterminée chez le Lupin blanc d'hiver. Conséquences agronomiques et sélection. Thèse. 1994.

10. TechnicalQuestionnaire

TECHNICALQUESTIONNAIRE	Page { x } of { y }	ReferenceNumber:
		Applicationdate: (nottobefille dinbytheapplicant)
TECHNICALQUESTIONNAIRE tobecompletedinconnectionwithanapplicationforplantbreeders' rights		
1. SubjectoftheTechnicalQuestionnaire		
		Please,indicate:
1.1.1 <i>LatinName</i>	<input type="text" value="Lupinus albus L."/>	<input type="checkbox"/>
1.1.2 CommonN ame	<input type="text" value="WHITE LUPIN"/>	
1.2.1 <i>LatinName</i>	<input type="text" value="Lupinus angustifolius L."/>	<input type="checkbox"/>
1.2.2 CommonName	<input type="text" value="NARROWLEAF LUPIN/BLUE LUPIN"/>	
1.3.1 <i>LatinName</i>	<input type="text" value="Lupinus luteus L."/>	<input type="checkbox"/>
1.3.2 CommonName	<input type="text" value="YELLOW LUPIN"/>	
2. Applicant		
Name	<input type="text"/>	
Address	<input type="text"/>	
TelephoneNo.	<input type="text"/>	
FaxNo.	<input type="text"/>	
E-mailaddress	<input type="text"/>	
Breeder(ifdifferentfromapplicant)	<input type="text"/>	

TECHNICALQUESTIONNAIRE	Page { x } of { y }	ReferenceNumber:
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3. Proposeddenominationandbreeder'sreference

Proposeddenomination  
(ifavailable)

Breeder'sreference

4. Informationonthebreedingschemeandpropagationofthevariety

4.1 BreedingScheme

4.2 MethodofPropagatingtheVariety

TECHNICALQUESTIONNAIRE	Page { x } of { y }	ReferenceNumber:
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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 one which best corresponds).

Characteristics	Example Varieties	Note
<b>5.1 Grain: bitter principle (1)</b>		
absent	Nelly (Lal), Bordako (Lan), Borselva (Llu)	1 [ ]
present	Feli (Lal), Azuro (Lan), Trebisa (Llu)	9 [ ]
<b>5.2 Stem: anthocyanin coloration prior to bud emergence (4)</b>		
absent or very weak	Minori (Lal), Bolivio (Lan),	1 [ ]
weak	Juno (Llu)	3 [ ]
medium	Nelly (Lal), Boltensia (Lan)	5 [ ]
strong	Sonet (Lan)	7 [ ]
very strong		9 [ ]
<b>5.3 Flower: color of wings (10)</b>		
white	Minori (Lal)	1 [ ]
bluish white	Nelly (Lal)	2 [ ]
blue	Azuro (Lan)	3 [ ]
violet	Bordako (Lan)	4 [ ]
pink	Rubine (Lan)	5 [ ]
light yellow	Teo (Llu)	6 [ ]
dark yellow	Juno (Llu)	7 [ ]



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?

7.1.1 Resistance to pest and diseases

Yes  No

(If yes, please provide details)

7.1.2 Other

Yes  No

(If yes, please provide details)

7.2 Special conditions for the examination of the variety

7.2.1 seasonal type

(i) spring type

(ii) winter type

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

Yes  No

(If yes, please give details)

7.3 Other information



8. Authorization for release

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

Yes  No

(b) Has such authorization been obtained?

Yes  No

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

9. 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]