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TG/LYCIUM_BAR(proj.5)
ORIGINAL: English
DATE: 2025-05-16

INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

Geneva

DRAFT

GOJI

UPOV Code(s): LYCIU_BAR; LYCIU_CHI; LYCIU_CYL; LYCIU_DAS; LYCIU_RUT; LYCIU_TRU; LYCIU_YUN

Lycium barbarum L.;
Lycium chinense Mill.;
Lycium cylindricum Kuang & A. M. Lu;
Lycium dasystemum Pojark.;
Lycium ruthenicum Murray;
Lycium truncatum Y. C. Wang;
Lycium yunnanense Kuang & A. M. Lu

GUIDELINES

FOR THE CONDUCT OF TESTS

FOR DISTINCTNESS, UNIFORMITY AND STABILITY

prepared by an expert from China

to be considered by the

Technical Working Party for Fruit Crops at its fifty-sixth session,
to be held in Bursa, Türkiye, from 2025-06-23 to 2025-06-26

* 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.]

Alternative Names:*

Botanical name	*English*	*French*	*German*	*Spanish*
Lycium barbarum L., *Lycium halimifolium* Mill., *Lycium vulgare* Dunal	Barbary matrimony-vine, Chinese boxthorn, Chinese wolfberry, Duke of Argyll's teaplant, Duke of Argyll's teatree, Himalayan goji, Tibetan goji, goji-berry, Matrimony-vine		Bocksdorn	
Lycium chinense Mill.	Chinese Boxthorn, Chinese Matrimony-vine, Chinese Wolfberry, Duke of Argyle's Tea Tree, Wolfberry	Lyciet de Chine	Chinesischer Bocksdorn	
Lycium cylindricum Kuang & A. M. Lu				
Lycium dasystemum Pojark.				
Lycium ruthenicum Murray				
Lycium truncatum Y. C. Wang				
Lycium yunnanense Kuang & A. M. Lu				

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.

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1. Subject of these Test Guidelines

1.1 These Test Guidelines apply to all varieties of *Lycium barbarum* L., *Lycium chinense* Mill., *Lycium cylindricum* Kuang & A. M. Lu, *Lycium dasystemum* Pojark., *Lycium ruthenicum* Murray, *Lycium truncatum* Y. C. Wang and *Lycium yunnanense* Kuang & A. M. Lu.

1.2 Guidance on the use of Test Guidelines for species in the same genus / interspecific hybrids that are not explicitly covered by Test Guidelines is provided in document TGP/13"Guidance for New Types and Species".

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 vegetatively propagated plants.

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

5 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 may be observed from a single planting, examined in two separate growing cycles.

3.1.3 In particular, it is essential that the plants produce a satisfactory crop of fruit in each of the two growing cycles.

3.1.4 The growing cycle is considered to be the duration of a single growing season, beginning with the dormancy period, followed by bud burst (flowering and/or vegetative), flowering and fruit harvest and concluding when the following dormant period starts.

3.1.5 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

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

3.4.1 Each test should be designed to result in a total of at least 5 plants.

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 3 plants or parts of plants taken from each of 3 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 2.

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 5 plants, no off-types are allowed.

4.3 Stability

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

4.3.2 Where appropriate, or in cases of doubt, stability may be 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) Leaf: shape (characteristic 13)
(b) Fruit: shape in lateral view (characteristic 22)
(c) Fruit: color (characteristic 23)

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.

(1)	*Lycium barbarum* L.	FPW07
(1)	*Lycium barbarum* L.	Instant Success
(1)	*Lycium barbarum* L.	Jingqi 4 Hao
(1)	*Lycium barbarum* L.	Keqi 6081
(1)	*Lycium barbarum* L.	Keqi 6082
(1)	*Lycium barbarum* L.	Ningqi 1 Hao
(1)	*Lycium barbarum* L.	Ningqi 2 Hao
(1)	*Lycium barbarum* L.	Ningqi 3 Hao
(1)	*Lycium barbarum* L.	Ningqi 4 Hao
(1)	*Lycium barbarum* L.	Ningqi 5 Hao
(1)	*Lycium barbarum* L.	Ningqi 7 Hao
(1)	*Lycium barbarum* L.	Ningqi 8 Hao
(1)	*Lycium barbarum* L.	Ningnongqi 9 Hao
(1)	*Lycium barbarum* L.	Ningnongqi 18 Hao
(1)	*Lycium barbarum* L.	NQ1
(1)	*Lycium barbarum* L.	Qixin 1 Hao
(1)	*Lycium barbarum* L.	Qixin 3 Hao
(2)	*Lycium barbarum* L. var. *auyanticarpum* K. F. Ching	Ningnongqi 4 Hao
(2)	*Lycium barbarum* L. var. *auyanticarpum* K. F. Ching	Ningnongqi 5 Hao
(2)	*Lycium barbarum* L. var. *auyanticarpum* K. F. Ching	Ningnongqi 16 Hao
(2)	*Lycium barbarum* L. var. *auyanticarpum* K. F. Ching	Ningnongqi 19 Hao
(2)	*Lycium barbarum* L. var. *auyanticarpum* K. F. Ching	Ningnongqi 20 Hao
(3)	*Lycium chinense* Mill.	Tianjing 3 Hao
(4)	*Lycium ruthenicum* Murray.	Jinmozhu
(4)	*Lycium ruthenicum* Murray.	Linqi 1 Hao

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)-(x) See Explanations on the Table of Characteristics in Chapter 8.1

7 Growth stage key (if applicable) See Explanations on the Table of Characteristics in Chapter 8.3

(1), (2), (3), (4) See Chapter 6.4

7. Table of Characteristics/Tableau des caracteres/Merkmalstabelle/Tabla de caracteres

		English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
1.	**(*)**	**PQ**	**VG**	**(+)**	**(a)**				
		Plant: growth habit							
		upright							1
		upright to spreading							2
		spreading							3
		drooping							4
2.		**QN**	**VG**	**(+)**	**(a)**				
		Plant: number of basal shoots							
		few						NQ1 (1)	1
		medium						FPW07 (1)	2
		many						Instant Success (1)	3
3.	**(*)**	**QN**	**MG/VG**	**(+)**					
		One-year-old shoot: length							
		short						Ningnongqi 5 Hao (2)	1
		short to medium							2
		medium						Ningnongqi 20 Hao (2)	3
		medium to long							4
		long						Qixin 1 Hao (1)	5
4.		**QN**	**MG/VG**	**(+)**	**(b)**				
		One-year-old shoot: thickness							
		thin						Ningqi 1 Hao (1)	1
		medium						Ningqi 7 Hao (1)	2
		thick						Keqi 6082 (1)	3
5.	**(*)**	**QN**	**MG/VG**		**(b)**				
		One-year-old shoot: length of internode							
		short						Jinmozhu (4)	1
		medium						Ningnongqi 4 Hao (2)	2
		long						Ningqi 2 Hao (1)	3

		English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
6.	**(*)**	**QL**	**VG**		**(b)**				
		One-year-old shoot: presence of thorns							
		absent							1
		present						Ningqi 3 Hao (1)	9
7.		**QN**	**MS/VG**	**(+)**	**(b)**				
		<u>Only varieties with: One-year-old shoot: presence of thorns: present:</u> One-year-old shoot: length of thorns							
		short							1
		medium						Ningnongqi 16 Hao (2)	2
		long							3
8.	**(*)**	**QN**	**VG**	**(+)**					
		Shoot: density of fruits							
		sparse							1
		sparse to medium						Ningnongqi 20 Hao (2)	2
		medium						Ningqi 5 Hao (1)	3
		medium to dense						Ningnongqi 16 Hao (2)	4
		dense						Ningqi 1 Hao (1)	5
9.		**PQ**	**VG**	**(+)**					
		Bark: color							
		yellow brown						Ningqi 7 Hao (1)	1
		light brown						Ningqi 5 Hao (1)	2
		dark brown						Ningqi 1 Hao (1)	3
		grey brown						Ningnongqi 9 Hao (1)	4
10.	**(*)**	**QN**	**MG/VG**	**(+)**	**(c)**				
		Leaf: length							
		short						Ningnongqi 5 Hao (2)	1
		short to medium						Ningqi 4 Hao (1)	2
		medium						Ningqi 5 Hao (1)	3
		medium to long						Ningqi 2 Hao (1)	4
		long						Ningnongqi 20 Hao (2)	5

		English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
11.	**(*)**	**QN**	**MG/VG**	**(+)**	**(c)**				
		Leaf: width							
		narrow						Jinmozhu (4), Ningnongqi 5 Hao (2)	1
		narrow to medium						Ningqi 4 Hao (1)	2
		medium						Ningqi 3 Hao (1)	3
		medium to broad						Ningqi 7 Hao (1)	4
		broad						Ningnongqi 4 Hao (2)	5
12.		**QN**	**MG/VG**		**(c)**				
		Leaf: ratio length/width							
		low						Ningnongqi 4 Hao (2)	1
		low to medium						Ningnongqi 18 Hao (1)	2
		medium						Ningqi 4 Hao (1)	3
		medium to high						Ningqi 5 Hao (1)	4
		high						Ningqi 8 Hao (1)	5
13.	**(*)**	**PQ**	**VG**	**(+)**	**(c)**				
		Leaf: shape							
		ovate							1
		lanceolate						Ningqi 7 Hao (1)	2
		linear							3
14.		**PQ**	**VG**		**(c)**				
		Leaf: color on upper side							
		light green							1
		medium green						Ningqi 1 Hao (1)	2
		dark green							3
		grey green						Jinmozhu (4)	4
		yellow green							5
15.		**PQ**	**VG**	**(+)**	**(c)**				
		Leaf: shape of apex							
		narrow acute						Ningqi 5 Hao (1)	1
		medium acute							2
		obtuse							3
		rounded							4

		English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
16.		**QN**	**MG/VG**	**(+)**	**(d)**				
		Corolla: diameter							
		small						Qixin 3 Hao (1)	1
		small to medium						Ningqi 5 Hao (1)	2
		medium						Jingqi 4 Hao (1)	3
		medium to large						Keqi 6081 (1)	4
		large						Ningnongqi 20 Hao (2)	5
17.		**QL**	**VG**		**(d)**				
		Corolla: color of lobe							
		white							1
		purple							2
18.		**QN**	**MG/VG**	**(+)**	**(d)**				
		Corolla: length of tube							
		short						Ningqi 7 Hao (1)	1
		medium						Ningnongqi 5 Hao (2)	2
		long						Keqi 6082 (1)	3
19.		**QN**	**VG**	**(+)**	**(e)**				
		Peduncle: attachment to calyx							
		mostly symmetrical						Ningnongqi 5 Hao (2)	1
		equally symmetrical and asymmetrical						Ningnongqi 19 Hao (2)	2
		mostly asymmetrical						Ningnongqi 9 Hao (1)	3
20.	**(*)**	**QN**	**MG/VG**	**(+)**	**(e)**				
		Fruit: length							
		short						Ningnongqi 5 Hao (2)	1
		short to medium						Ningnongqi 4 Hao (2)	2
		medium						Ningqi 1 Hao (1)	3
		medium to long						Ningnongqi 9 Hao (1)	4
		long						Ningqi 8 Hao (1)	5

		English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
21.	**(*)**	**QN**	**MG/VG**	**(+)**	**(e)**				
		Fruit: width							
		narrow						Ningqi 2 Hao (1)	1
		medium						Ningqi 7 Hao (1)	2
		broad						Ningnongqi 18 Hao (1)	3
22.	**(*)**	**PQ**	**VG**	**(+)**	**(e)**				
		Fruit: shape in lateral view							
		ovate							1
		oblate							2
		circular							3
		rhombic							4
		elliptic							5
		obovate							6
23.	**(*)**	**PQ**	**VG**		**(e)**				
		Fruit: color							
		whitish							1
		yellow							2
		yellow orange							3
		orange							4
		orange red							5
		red							6
		purple red						Qixin 3 Hao (1)	7
		dark purple							8
24.		**QL**	**VG**	**(+)**					
		Fruit: mucro							
		absent							1
		present							9
25.		**QN**	**VG**	**(+)**	**(e)**				
		Fruit: length of stalk							
		short						Linqi 1 Hao (4)	1
		short to medium						Ningnongqi 5 Hao (2)	2
		medium						Ningqi 7 Hao (1)	3
		medium to long						Qixin 1 Hao (1)	4
		long						Keqi 6081 (1)	5

		English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
26.		**PQ**	**VG**	**(+)**	**(e)**				
		Fruit: color of stalk							
		medium green							1
		bluish green							2
		green and purple							3
		blue							4
27.		**QN**	**MG/VG**	**(+)**					
		Time of beginning of fruit maturity							
		early						Ningnongqi 18 Hao (1)	1
		medium						Ningqi 1 Hao (1)	2
		late						Ningnongqi 4 Hao (2)	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) Observations should be made on dormant plants.

(b) Observations should be made on the middle third of a one-year-old shoot in the dormant period.

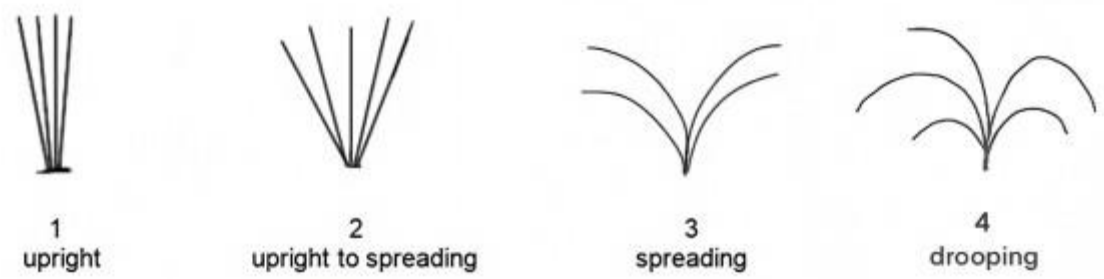
(c) Observations should be made on the fully developed leaves taken from the middle third of a current-year's fruiting shoot.

(d) Observations should be made on the fully open flowers taken from the middle third of a fruiting shoot.

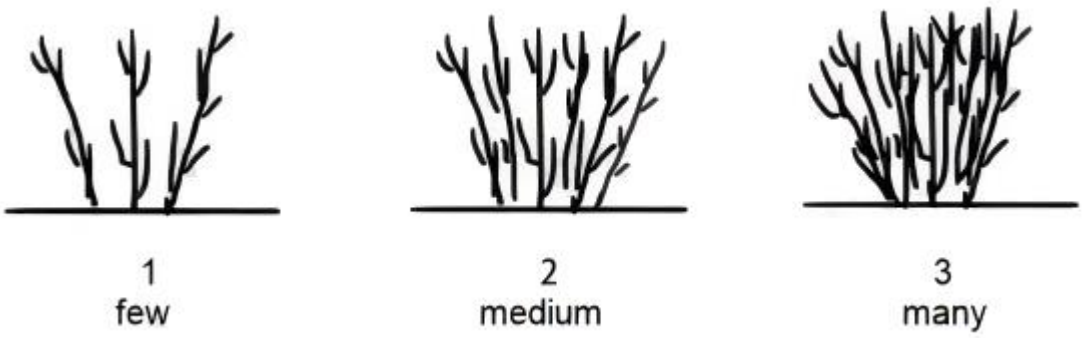
(e) Observations should be made on the fully ripened fruits taken from the middle third of a fruiting shoot.

8.2 Explanations for individual characteristics

Ad. 1: Plant: growth habit



Ad. 2: Plant: number of basal shoots



Ad. 3: One-year-old shoot: length

Observations should be made on the whole length of one-year-old fruiting shoots in the dormant period.

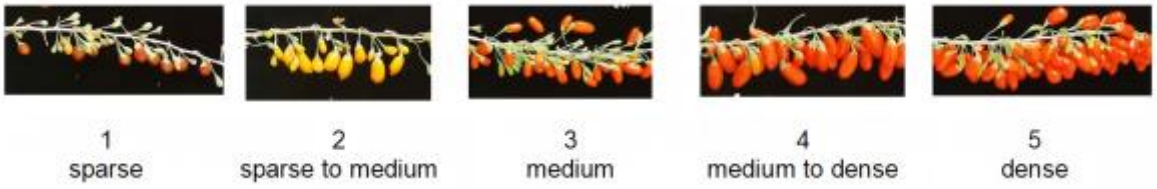
Ad. 4: One-year-old shoot: thickness

Observations should be made on the middle third of one-year-old shoots in the dormant period.

Ad. 7: Only varieties with: One-year-old shoot: presence of thorns: present: One-year-old shoot: length of thorns

Observations should be made on the longest thorn.

Ad. 8: Shoot: density of fruits

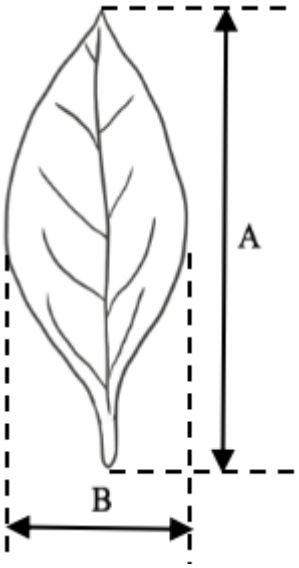


Observations should be made on the middle third of a fruiting shoot.

Ad. 9: Bark: color

Observations should be made on the middle third of two-year-old shoots in the dormant period.

Ad. 10: Leaf: length

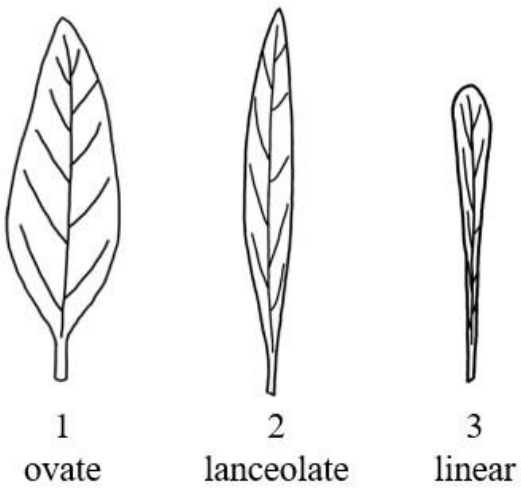


A=leaf: length
B=leaf: width

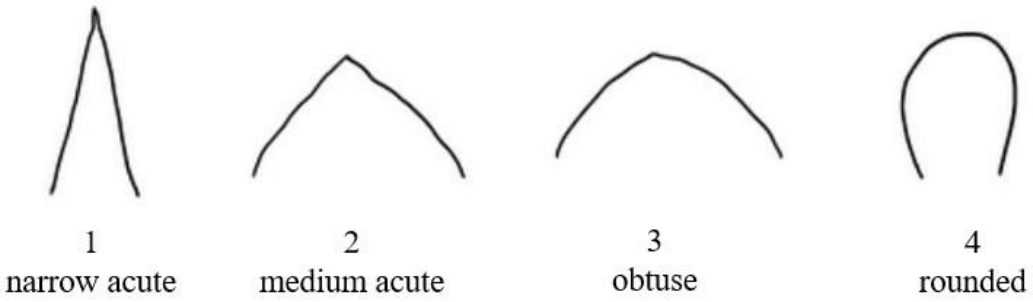
Ad. 11: Leaf: width

See Ad. 10.

Ad. 13: Leaf: shape



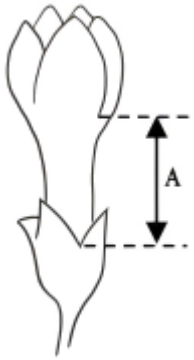
Ad. 15: Leaf: shape of apex



Ad. 16: Corolla: diameter

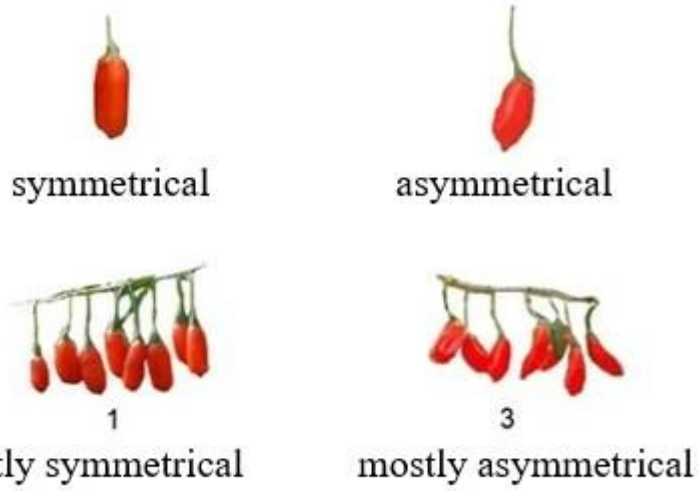
A=corolla: diameter

Ad. 18: Corolla: length of tube

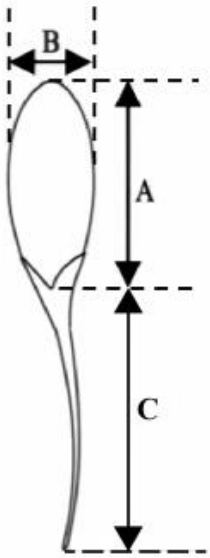


A=corolla: length of tube

Ad. 19: Peduncle: attachment to calyx



Ad. 20: Fruit: length



A=fruit: length
B=fruit: width
C=fruit: length of stalk

Ad. 21: Fruit: width

See Ad. 22.

Ad. 22: Fruit: shape in lateral view

	← broadest part →		
	below middle	at middle	above middle
Broad (low) ←width (ratio length/width) →narrow (high)	 1 ovate	 5 elliptic	 6 obovate
	 3 circular 4 rhombic		
	 2 oblate		

Ad. 24: Fruit: mucro

1
absent

9
present

Ad. 25: Fruit: length of stalk

See Ad. 22.

Ad. 26: Fruit: color of stalk

Observations should be made including the calyx.

Ad. 27: Time of beginning of fruit maturity

Time of beginning of fruit maturity is reached when 10% of the fruiting shoots of the whole plant have mature fruits in the first fruit ripening period.

9. Literature

石志刚，杜慧莹，门慧芹，2012: 枸杞种质资源描述规范和数据标准. 中国林业出版社. 北京，中国, 66pp.
(Zhi-gang S., Hui-ying D., Huiqin M., 2012: Description specification and data standard of germplasm resources for *Lycium* L. China forestry publishing house. Beijing, CN, 66 pp.)

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

1.1.1	Botanical name	*Lycium barbarum* L.	☐
1.1.2	Common name	Barbary matrimony-vine, Chinese boxthorn, Chinese wolfberry, Duke of Argyll's teaplant, Duke of Argyll's teatree, Himalayan goji, Tibetan goji, goji-berry, Matrimony-vine	
1.2.1	Botanical name	*Lycium chinense* Mill.	☐
1.2.2	Common name	Chinese Boxthorn, Chinese Matrimony-vine, Chinese Wolfberry,	
1.3.1	Botanical name	*Lycium cylindricum* Kuang & A. M. Lu	☐
1.3.2	Common name		
1.4.1	Botanical name	*Lycium dasystemum* Pojark.	☐
1.4.2	Common name		
1.5.1	Botanical name	*Lycium ruthenicum* Murray	☐
1.5.2	Common name		
1.6.1	Botanical name	*Lycium truncatum* Y. C. Wang	☐
1.6.2	Common name		
1.7.1	Botanical name	*Lycium yunnanense* Kuang & A. M. Lu	☐
1.7.2	Common name		
1.8.1	Botanical name	Other species, please specify	☐
1.8.2	Common name		

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

2. Applicant

Name	
Address	
Telephone No.	
Fax No.	
E-mail address	
Breeder (if different from applicant)	

3. Proposed denomination and breeder'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 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 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:

4.2 Method of propagating the variety

4.2.1 Vegetative propagation

(a) Cuttings [ ]
(b) In vitro propagation [ ]
(c) Budding or grafting (please specify rootstock) [ ]
(d) Other (state method) [ ]

4.2.2 Other
(Please 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 Varieties	Note
5.1 (1)	**Plant: growth habit**		
	upright		1 [ ]
	upright to spreading		2 [ ]
	spreading		3 [ ]
	drooping		4 [ ]
5.2 (3)	**One-year-old shoot: length**		
	short	Ningnongqi 5 Hao (2)	1 [ ]
	short to medium		2 [ ]
	medium	Ningnongqi 20 Hao (2)	3 [ ]
	medium to long		4 [ ]
	long	Qixin 1 Hao (1)	5 [ ]
5.3 (5)	**One-year-old shoot: length of internode**		
	short	Jinmozhu (4)	1 [ ]
	medium	Ningnongqi 4 Hao (2)	2 [ ]
	long	Ningqi 2 Hao (1)	3 [ ]
5.4 (6)	**One-year-old shoot: presence of thorns**		
	absent		1 [ ]
	present	Ningqi 3 Hao (1)	9 [ ]
5.5 (10)	**Leaf: length**		
	short	Ningnongqi 5 Hao (2)	1 [ ]
	short to medium	Ningqi 4 Hao (1)	2 [ ]
	medium	Ningqi 5 Hao (1)	3 [ ]
	medium to long	Ningqi 2 Hao (1)	4 [ ]
	long	Ningnongqi 20 Hao (2)	5 [ ]
5.6 (11)	**Leaf: width**		
	narrow	Jinmozhu (4), Ningnongqi 5 Hao (2)	1 [ ]
	narrow to medium	Ningqi 4 Hao (1)	2 [ ]
	medium	Ningqi 3 Hao (1)	3 [ ]
	medium to broad	Ningqi 7 Hao (1)	4 [ ]
	broad	Ningnongqi 4 Hao (2)	5 [ ]

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

	Characteristics	Example Varieties	Note
5.7 (13)	**Leaf: shape**		
	ovate		1 [ ]
	lanceolate	Ningqi 7 Hao (1)	2 [ ]
	linear		3 [ ]
5.8 (20)	**Fruit: length**		
	short	Ningnongqi 5 Hao (2)	1 [ ]
	short to medium	Ningnongqi 4 Hao (2)	2 [ ]
	medium	Ningqi 1 Hao (1)	3 [ ]
	medium to long	Ningnongqi 9 Hao (1)	4 [ ]
	long	Ningqi 8 Hao (1)	5 [ ]
5.9 (21)	**Fruit: width**		
	narrow	Ningqi 2 Hao (1)	1 [ ]
	medium	Ningqi 7 Hao (1)	2 [ ]
	broad	Ningnongqi 18 Hao (1)	3 [ ]
5.10 (22)	**Fruit: shape in lateral view**		
	ovate		1 [ ]
	oblate		2 [ ]
	circular		3 [ ]
	rhombic		4 [ ]
	elliptic		5 [ ]
	obovate		6 [ ]
5.11 (23)	**Fruit: color**		
	whitish		1 [ ]
	yellow		2 [ ]
	yellow orange		3 [ ]
	orange		4 [ ]
	orange red		5 [ ]
	red		6 [ ]
	purple red	Qixin 3 Hao (1)	7 [ ]
	dark purple		8 [ ]

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

	Characteristics	Example Varieties	Note
5.12 (27)	**Time of beginning of fruit maturity**		
	early	Ningnongqi 18 Hao (1)	1 [ ]
	medium	Ningqi 1 Hao (1)	2 [ ]
	late	Ningnongqi 4 Hao (2)	3 [ ]

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	*Leaf: length*	*short*	*medium*

Comments

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 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

A representative color photograph of the variety displaying its main distinguishing feature(s), should accompany the Technical Questionnaire. The photograph will provide a visual illustration of the candidate variety which supplements the information provided in the Technical Questionnaire.

The key points to consider when taking a photograph of the candidate variety are:

• Indication of the date and geographic location
• Correct labeling (breeder's reference)
• Good quality printed photograph (minimum 10 cm x 15 cm) and/or sufficient resolution electronic format version (minimum 960 x 1280 pixels)"

Further guidance on providing photographs with the Technical Questionnaire is available in document TGP/7 "Development of Test Guidelines", Guidance Note 35 (http://www.upov.int/tgp/en/).

[The link provided may be deleted by members of the Union when developing authorities' own test guidelines.]

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:

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”.

_____

9.3 Has the plant material to be examined been tested for the presence of virus or other pathogens?

Yes [ ]

(please provide details as specified by the Authority)

No [ ]

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]