TG/LONIC(proj.2)
ORIGINAL: English
DATE: 2011-10-05

UPOV

INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

GENEVA

DRAFT

BLUE HONEYSUCKLE, HONEYBERRY

UPOV Code: LONIC_CAE_EDU, LONIC_CAE_KAM

Lonicera caerulea var. *edulis* Turcz. ex Freyn, *Lonicera caerulea* var. *kamtschatica* Sevast.

[*]

GUIDELINES

FOR THE CONDUCT OF TESTS

FOR DISTINCTNESS, UNIFORMITY AND STABILITY

prepared by an expert from Germany

to be considered by the

Technical Working Party for Fruit Crops
at its forty-second session, to be held in Hiroshima, Japan, from November 14 to 18, 2011

Alternative Names:[*]

Botanical name	*English*	*French*	*German*	*Spanish*
Lonicera caerulea var. *edulis* Turcz. ex Freyn, *Lonicera caerulea* var. *kamtschatica* Sevast.	Blue Honeysuckle, Honeyberry	.....	Blaue Honigbeere	.....

<u>Comments CA:</u> (as to "Alternative names") to propose that the name 'Haskap' be included in the list of English alternative names as this is one of the common names by which this crop is known in Canada, the other being blue honeysuckle. (The term, 'Haskap', comes from the name given to it by the Ainu people of the northern islands of Japan who gathered and possibly grew it for hundreds of years, well before anyone was aware of the crop.)
Possible terminology for french alternative names include 'Camérisier bleu' (Source: GRIN).

[*] 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.]

Comments CA: (as to " Botanical name) to propose that the guideline be applicable to varieties of the species *Lonicera caerulea* L.only. The breeding work in Canada and other countries are also using var. *emphyllocalyx* and var. *villosa* in addition to those identified in the draft (i.e. *edulis* Turcz. Ex Freyn and *kamtschatica* Sevast.). As the characteristics in this guideline would be applicable to all of these var. of the species, I think it would still be correct to keep the guideline to *Lonicera caerulea* L. only. If this proposal is not acceptable, please consider adding the var. *emphyllocalyx* and var. *villosa*, thus requiring more coding for the GENIE database as well. (Source: GRIN at http://www.ars-grin.gov/cgi-bin/npgs/html/genform.pl)

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

These Test Guidelines apply to all fruit varieties of *Lonicera caerulea* var. *edulis* Turcz. ex Freyn and *Lonicera caerulea* var. *kamtschatica* Sevast.

2. Material Required

2.1 The competent authorities decide on the quantity and quality of the plant material required for testing the variety and when and where it is to be delivered. Applicants submitting material from a State other than that in which the testing takes place must ensure that all customs formalities and phytosanitary requirements are complied with.

2.2 The material is to be supplied in the form of plants on their own roots.

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 growing cycle is considered to be the duration of a single growing season, beginning with bud burst (flowering and/or vegetative), flowering and fruit harvest and concluding when the following dormant period ends with the swelling of new season buds.

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 In order to enable the assessment of growth habit characteristics, the plants should be grown as bushes.

3.4 Test Design

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

3.5 Additional Tests

Additional tests, for examining relevant characteristics, may be established.

4. Assessment of Distinctness, Uniformity and Stability

4.1 Distinctness

4.1.1 General Recommendations

It is of particular importance for users of these Test Guidelines to consult the General Introduction prior to making decisions regarding distinctness. However, the following points are provided for elaboration or emphasis in these Test Guidelines.

4.1.2 Consistent Differences

The differences observed between varieties may be so clear that more than one growing cycle is not necessary. In addition, in some circumstances, the influence of the environment is not such that more than a single growing cycle is required to provide assurance that the differences observed between varieties are sufficiently consistent. One means of ensuring that a difference in a characteristic, observed in a growing trial, is sufficiently consistent is to examine the characteristic in at least two independent growing cycles.

4.1.3 Clear Differences

Determining whether a difference between two varieties is clear depends on many factors, and should consider, in particular, the type of expression of the characteristic being examined, i.e. whether it is expressed in a qualitative, quantitative, or pseudo-qualitative manner. Therefore, it is important that users of these Test Guidelines are familiar with the recommendations contained in the General Introduction prior to making decisions regarding distinctness.

4.1.4 Number of Plants / Parts of Plants to be Examined

Unless otherwise indicated, for the purposes of distinctness, all observations on single plants should be made on 3 plants or parts taken from each of 3 plants and any other observations made on all plants in the test, disregarding any off-type plants.

4.1.5 Method of Observation

The recommended method of observing the characteristic for the purposes of distinctness is indicated by the following key in the second column of the Table of Characteristics (see document TGP/9 “Examining Distinctness”, Section 4 “Observation of characteristics”):

MG: single measurement of a group of plants or parts of plants
MS: measurement of a number of individual plants or parts of plants
VG: visual assessment by a single observation of a group of plants or parts of plants
VS: visual assessment by observation of individual plants or parts of plants

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

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

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

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

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

4.2 Uniformity

4.2.1 It is of particular importance for users of these Test Guidelines to consult the General Introduction prior to making decisions regarding uniformity. However, the following points are provided for elaboration or emphasis in these Test Guidelines:

4.2.2 For the assessment of uniformity, a population standard of 1% and an acceptance probability of at least 95% should be applied. In the case of a sample size of 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.

The following have been agreed as useful grouping characteristics:

(a) Plant: vigor (characteristic 1)
(b) Plant: habit (characteristic 2)
(c) Leaf blade: shape of apex (characteristic 14)
(d) Time of beginning of fruit ripening (characteristic 31)

5.3 Guidance for the use of grouping characteristics, in the process of examining distinctness, is provided through the General Introduction and document TGP/9 “Examining Distinctness”.

6. Introduction to the Table of Characteristics

6.1 Categories of Characteristics

6.1.1 Standard Test Guidelines Characteristics

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

6.1.2 Asterisked Characteristics

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

6.2 States of Expression and Corresponding Notes

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

6.2.2 In the case of qualitative and pseudo-qualitative characteristics (see Chapter 6.3), all relevant states of expression are presented in the characteristic. However, in the case of quantitative characteristics with 5 or more states, an abbreviated scale may be used to

minimize the size of the Table of Characteristics. For example, in the case of a quantitative characteristic with 9 states, the presentation of states of expression in the Test Guidelines may be abbreviated as follows:

State	Note
small	3
medium	5
large	7

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

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

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

6.3 Types of Expression

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

6.4 Example Varieties

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

6.5 Legend

(*) Asterisked characteristic – see Chapter 6.1.2

QL: Qualitative characteristic – see Chapter 6.3
QN: Quantitative characteristic – see Chapter 6.3
PQ: Pseudo-qualitative characteristic – see Chapter 6.3

MG, MS, VG, VS: see Chapter 4.1.5

(a)-(g) 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
1. (*) (+)	**VG**	**Plant: vigor**					
QN	**(a)**	weak				88/6	3
		medium				SK: Amur	5
		strong				SK: Altai	7
2. (*)	**VG**	**Plant: habit**					
QN	**(a)**	upright				L-Kola 1, SK: Amur	1
		semi-upright				L-Kola 28, SK: Altai	2
		spreading				88/7	3
3.	**VG**	**Plant: branching**					
(+)							
QN	**(a)**	weak				L-Kola 1	3
		medium				L-Kola 28	5
		strong				88/6	7
4. (*)	**VG**	**One-year-old shoot: lenticels**					
QL	**(a)**	absent					1
		present					9
5. (*)	**VG**	**One-year-old shoot: pubescence**					
QN	**(a)**	absent or very weak				Amur	1
		weak				Altai	3
		medium					5
		strong				88/6	7

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
6. (*)	**VG**	**One-year-old shoot: color of bark**					
PQ	**(a)**	yellow brown					1
		light brown					2
		dark brown					3
		red brown					4
7. (*) (+)	**VG**	**One-year-old shoot: development of adventitious buds**					
QN	**(a)**	weak					3
		medium				L-Kola 28	5
		strong				L-Kola 1	7
8. (+)	**VG**	**Shoot: pubescence of tip**					
QN	**(a)**	absent or weak				L-Kola 28	1
		medium					3
		strong				88/6, 88/7	5
9. (+)	**VG**	**Shoot: glossiness of bark of tip**					
QN	(a)	absent or weak				88/6, 88/7	1
		medium					2
		strong				L-Kola 1, L-Kola 28	3
10.	**VG**	**Shoot: anthocyanin coloration of tip**					
QN		absent or very weak				88/7	1
		weak				L-Kola 28	2
		medium					3
		strong					4
		very strong					5

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
11. (*)	**MG/ VG**	**Leaf blade : length**					
QN	**(b)**	short					3
		medium					5
		long					7
12. (*)	**MG/ VG**	**Leaf blade: width**					
QN	**(b)**	narrow					3
		medium					5
		broad					7
13. (*)	**MG/ VG**	**Leaf blade : ratio length/width ratio**					
QN	**(b)**	moderately compressed					3
		medium					5
		moderately elongated					7
14. (*) (+)	**VG**	**Leaf: shape of apex**					
PQ	**(b)**	acute				L-Kola 28, SK: Altai	1
		obtuse					2
		rounded				88/7, SK: Amur	3
15.	**VG**	**Leaf blade: pubescence of lower side**					
QN	**(b)**	absent or very weak				L-Kola 1, L-Kola 28, SK: Amur	1
		very weak					3
		medium				88/6, SK: Altai	5
		strong				88/7	7
		very strong					9

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
16.	**VG**	**Leaf blade: intensity of green color on upper side**					
QN	**(b)**	light					1
		medium				88/7	3
		dark				88/6	5
17. **(+)**	**VG**	**Stem-clasping leaf: size**					
QN	**(b)**	small					1
		medium				L-Kola 28	3
		large					5
18. **(+)**	**VG**	**Stem-clasping leaf: pubescence**					
QL	**(b)**	absent					1
		present				L-Kola 1	9
19. **(*)**	**MG/ VG**	**Petiole: length**					
QN	**(b)**	short					1
		medium					3
		long					5
20. **(*)** **(+)**	**MG/ VG**	**Leaf: length of blade relative to length of petiole**					
QN	**(b)**	small					1
		medium					3
		large					5

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
21. (+)	**VG**	**Flower: pubescence of corolla tube**					
QN	**(c)**	weak				L-Kola 1	1
		medium				L-Kola 28	2
		strong					3
DE: to consider to have the states 1, 3, 5							
22.	**VG**	**Flower: attitude**					
QN	**(c)**	upwards					1
		horizontal					2
		downwards					3
to be considered as a new characteristic							
23.	**VG**	**Flower: style length compared to anther length**					
QN	**(c)**	shorter					1
		equal					2
		longer					3
to be considered as a new characteristic							
24. (*)	**VG**	**Sepal: length**					
QN	**(c)**	short					1
		medium				SK: Amur	3
		long				SK: Altai	5
(as to Char. 24.) to be considered as a new characteristic **Comment CA: to propose another shape – to add the shape, 'linear', as state 4.**							
25. (*)	**MG/ VG**	**Fruit: length**					
QN	**(d)**	short					3
		medium				Amur	5
		long				Altai	7

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
26. (*)	**MG/ VG**	**Fruit: width**					
QN	**(d)**	narrow					3
		medium					5
		broad					7
27. (*)	**VG**	**Fruit: shape in cross section**					
QN	**(d)**	oblate					1
		elliptic					2
		circular					3
to be considered as a new characteristic							
28. (*) (+)	**VG**	**Fruit: shape (in lateral view)**					
PQ	**(d)**	ovate					1
		obovate					2
		oblong					3
29. (+)	**VG**	**Fruit: shape at calyx end**					
PQ	**(d)**	acute					1
		rounded					2
		flared					3
		flat					4
to be considered as a new characteristic							
30. (+)	**VG**	**Fruit: size of eye opening**					
QN	**(d)**	small					1
		medium					3
		large					5
to be considered as a new characteristic							

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
31. **(+)**	**VG**	**Fruit: appearance of skin**					
QN	**(d)**	smooth				L-Kola 1	1
		internediate					2
		uneven				L-Kola 28	3
DE: to consider to have the states 1, 3, 5							
32.	**VG**	**Fruit: bloom of skin**					
QN	**(d)**	weak					1
		medium					3
		strong				SK: Amur, SK: Altai	5
33. **(+)**	**VG**	**Fruit: intensity of blue color of skin**					
QN	**(d)**	light					1
		medium					3
		dark					5
34.	**VG**	**Fruit: tufts of hairs at apex**					
QL	**(d)**	absent				L-Kola 1	1
		present				88/7	9
to check whether truly QL							
35. **(*)** **(+)**	**MG**	**Time of bud burst**					
QN		early				L-Kola 28	3
		medium				L-Kola 1	5
		late				88/6, 88/7	7

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
36. (*) (+)	**MG**	**Time of beginning of flowering**					
QN		early				L-Kola 28, SK: Altai	3
		medium				L-Kola 1, SK: Amur	5
		late					7
37. (*) (+)	**MG**	**Time of beginning of fruit ripening**					
QN		early				L-Kola 1, L-Kola 28, SK: Altai	3
		medium				88/6, 88/7, SK: Amur	5
		late					7

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) All observations on the plant should be made on unpruned bushes in the dormant season.
(b) Unless otherwise stated, all observations on the leaf should be made at the stage of fully developed leaves at fruit maturity on the upper third of typical one-year-old shoots.
(c) All observations on the flower should be made at the time of full flowering.
(d) All observations on the fruit should be made at the time when the fruit is ready to be picked.

CA: Characteristics 8-10 do not include at what stage these characteristics should be observed. Is it intended that the young shoots be observed during active growth. Would it be acceptable UPOVian terminology to call them 'young shoot', then in 8.1 it could be stated that the observation should be made at the stage of rapid growth? Would it be appropriate to refer to 'of tip' as 'at growing point'?

8.2 Explanations for individual characteristics

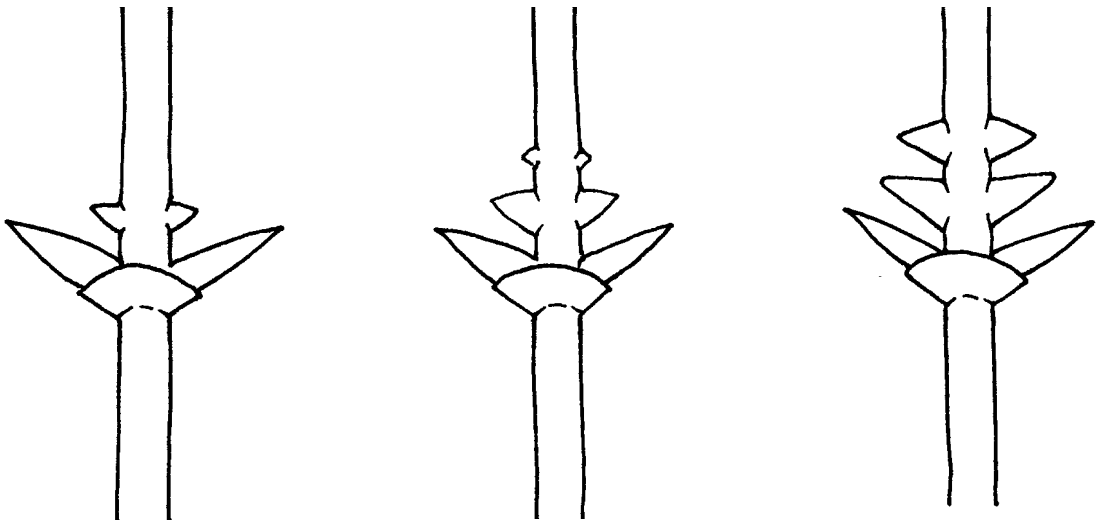
Ad. 1: Plant: vigor

The vigor of the plant should be considered as the overall abundance of vegetative growth.

Ad. 3: Plant: branching

The branching of the plant is considered to be the number of branches and the amount of lateral shoots.

Ad. 7: One-year-old shoot: development of adventitious buds



3 weak | 5 medium | 7 strong

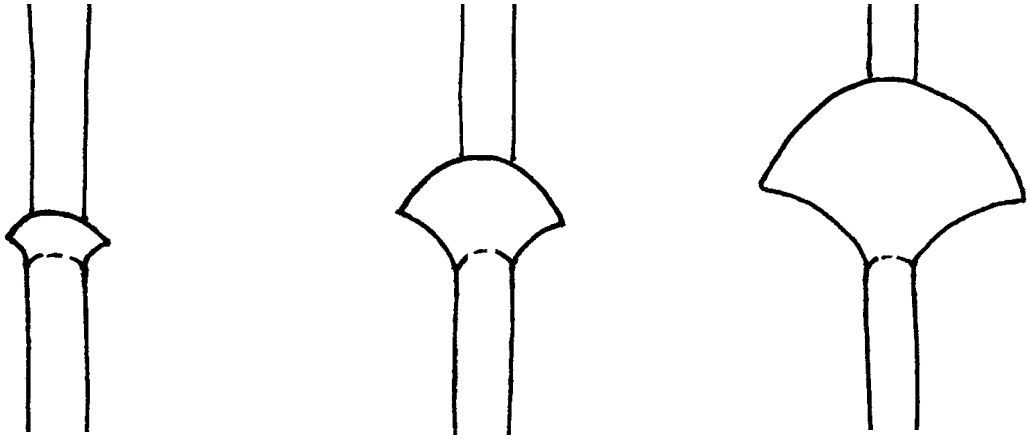
Ad. 7: One-year-old shoot: development of adventitious buds
Ad. 8: Shoot: pubescence of tip
Ad. 9: Shoot: glossiness of bark of tip

To be observed during rapid growth.

Ad. 14: Leaf: shape of apex

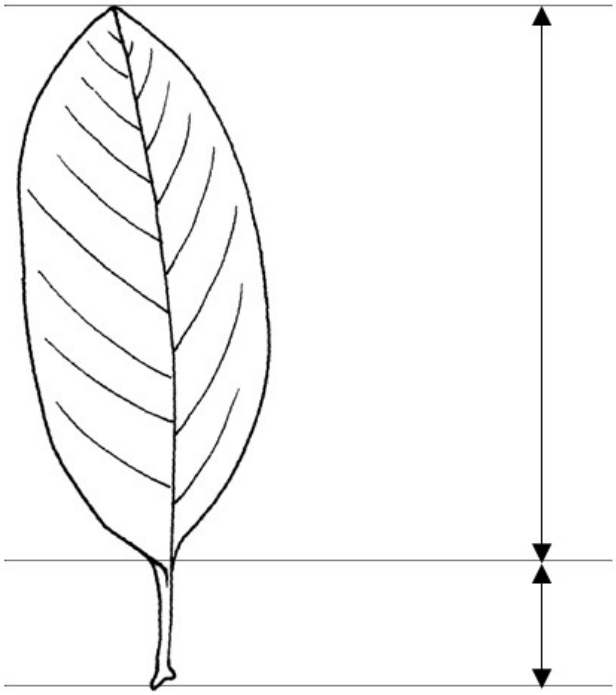
1	2	3
acute	obtuse	rounded

Ad. 17: Stem-clasping leaf: size
Ad. 18: Stem-clasping leaf: pubescence



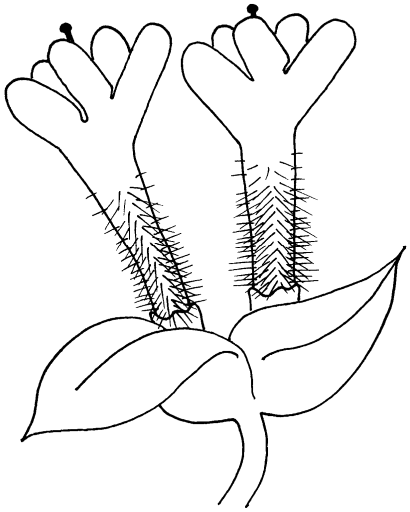
1	3	5
small	medium	large

Ad. 20: Leaf: length of blade relative to length of petiole

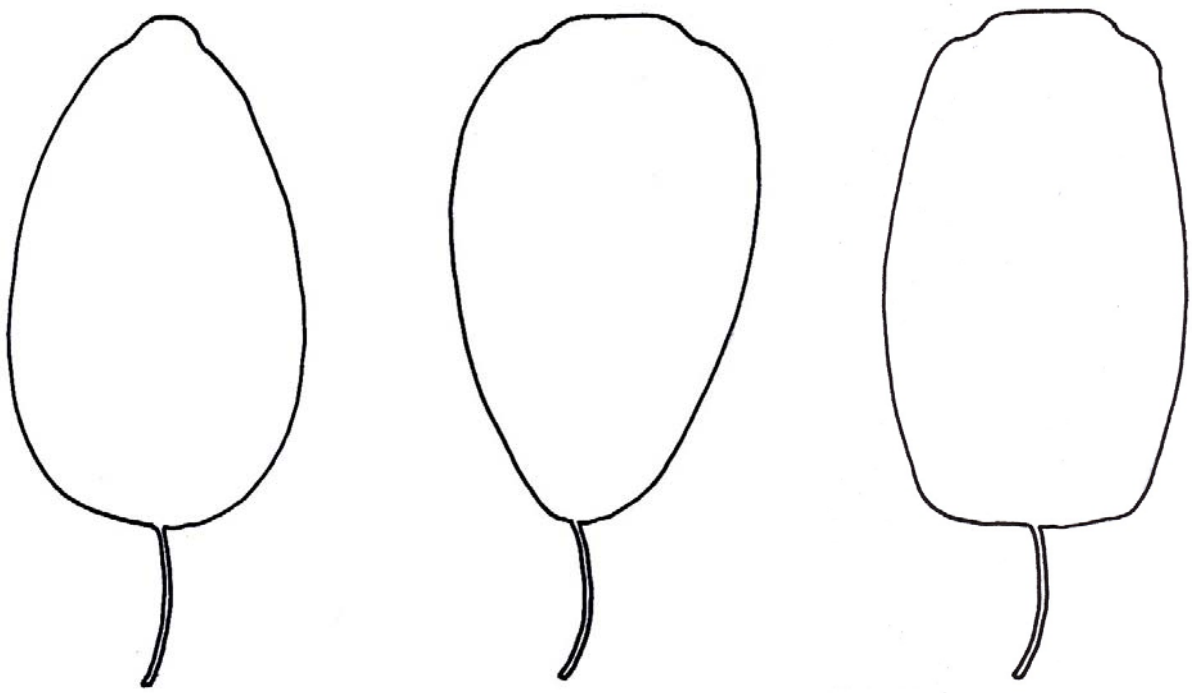


Ad. 21: Flower: pubescence of corolla tube

The pubescence is to be observed at the base of the corolla of a single flower.



Ad. 28: Fruit: shape (in lateral view)

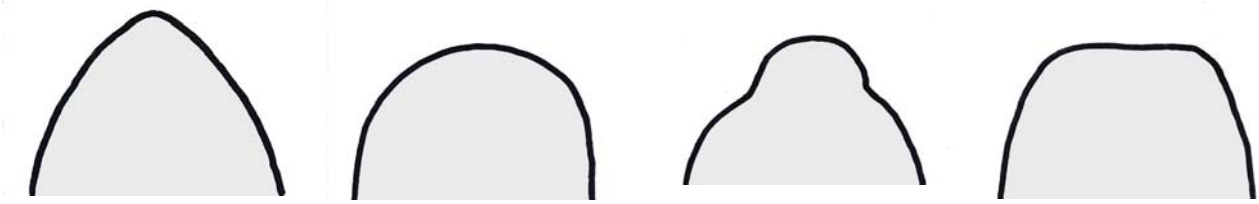


1
ovate

2
obovate

3
oblong

Ad. 29: Fruit: shape at calyx end



1
acute

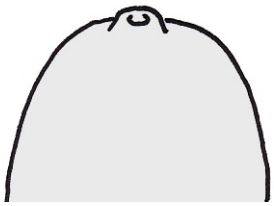
2
rounded

3
flared

4
flat

Comments CA: The diagram for the state 'flared' should be similar to 'truncate' in apex shapes of TGP/14. Would the following diagram be acceptable?

Ad. 30: Fruit: size of eye opening

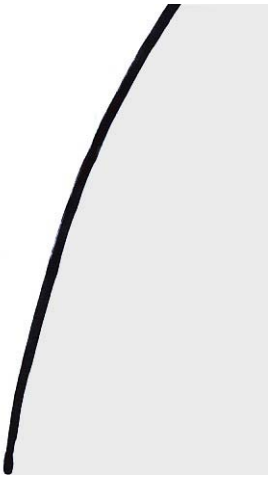


1
small

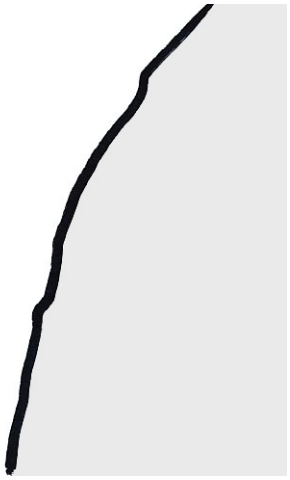
3
medium

5
large

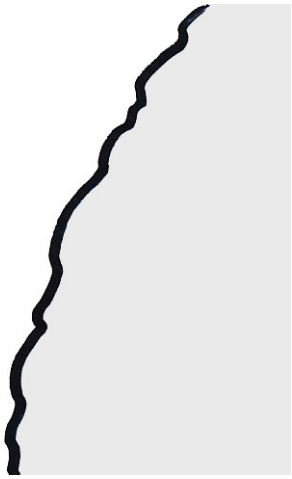
Ad. 31: Fruit: appearance of skin



1
smooth



2
intermediate



3
uneven

Ad. 33: Fruit: intensity of blue color of skin

The blue color of skin should be assessed after the removal of bloom.

Ad. 35: Time of bud burst

The time of bud burst is when 10% of the plants show bud burst.

Ad. 36: Time of beginning of flowering

The time of beginning of flowering is when 10% of the plants start flowering.

Ad. 37: Time of beginning of fruit ripening

The time of beginning of fruit ripening is when the fruit starts to be most easily removed from the plant.

9. Literature

Hummer, K.E., 2006: Blue Honeysuckle: A New Berry Crop for North America. Journal of the American Pomological Society 60(1), Article 1. US

Plekhanova, M.N., 2000: Blue Honeysuckle (*Lonicera caerulea* L.) – A New Commercial Berry Crop for Temperate Climate: Genetic Ressources and Breeding. ISHS Acta Horticulturae 538: Eucarpia Symposium on Fruit Breeding and Genetics. DE

Smolik M., Ochmian I., Grajkowski J., 2010: Genetic variability of Polish and Russian accessions of cultivated blue honeysuckle (*Lonicera caerulea*). Genetika 46(8):1079-85

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	*Lonicera caerulea* var. *edulis* Turcz. ex Freyn*; Lonicera caerulea* var. *kamtschatica* Sevast.
1.2 Common name	Blue Honeysuckle, Honeyberry

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 varieties)

(……..……..…) x (……..……..…)
female parent male parent

(b) partially known cross [ ]
(please state known parent variety(ies))

(……..……..…) x (……..……..…)
female parent male parent

(c) unknown cross [ ]

4.1.2 Mutation [ ]
(please state parent variety)

4.1.3 Discovery and development [ ]
(please state where and when discovered and how developed)

4.1.4 Other [ ]
(please provide details)

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

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

4.2 Method of propagating the variety

4.2.1 Vegetative propagation

(a) cuttings [ ]

(b) *in vitro* propagation [ ]

(c) other (state method) [ ]

4.2.2 Seed [ ]

4.2.3 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: vigor**		
	very weak		1[ ]
	very weak to weak		2[ ]
	weak	88/6	3[ ]
	weak to medium		4[ ]
	medium	Amur	5[ ]
	medium to strong		6[ ]
	strong	Altai	7[ ]
	strong to very strong		8[ ]
	very strong		9[ ]
5.2 (2)	**Plant: habit**		
	upright	L-Kola 1, Amur	1[ ]
	semi-upright	L-Kola 28, Altai	2[ ]
	spreading	88/7	3[ ]
5.3 (14)	**Leaf blade: shape of apex**		
	acute	L-Kola 28, Altai	1[ ]
	obtuse		2[ ]
	rounded	88/7, Amur	3[ ]
to consider to add the following as TQ characteristic:			
5.4 (28)	**Fruit: shape (in lateral view)**		
	ovate		1[ ]
	obovate		2[ ]
	oblong		3[ ]

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

5.5 (37)	**Time of beginning of fruit ripening**		
	very early		1[ ]
	very early to early		2[ ]
	early	L-Kola 1, L-Kola 28	3[ ]
	early to medium		4[ ]
	medium	88/6, 88/7	5[ ]
	medium to late		6[ ]
	late		7[ ]
	late to very late		8[ ]
	very late		9[ ]

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	*Fruit: shape (in lateral view)*	*ovate*	*oblong*

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 image of the variety should accompany the Technical Questionnaire.

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:

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]