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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

Geneva

DRAFT

JAPANESE PEAR *

UPOV Code(s): PYRUS_PYR;
PYRUS_USS, PYRUS_PUS

Pyrus pyrifolia (Burm. f.) Nakai;
Pyrus ussuriensis Maxim. & Rupr.;
Hybrids between *Pyrus pyrifolia* and *Pyrus ussuriensis*

GUIDELINES

FOR THE CONDUCT OF TESTS

FOR DISTINCTNESS, UNIFORMITY AND STABILITY

prepared by an expert from Japan

to be considered by the

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

Disclaimer: this document does not represent UPOV policies or guidance

* 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*
Pyrus pyrifolia (Burm. f.) Nakai	Asian pear, Chinese pear, Chinese sand pear, Japanese pear, Nashi, Nashi pear, Oriental pear, Sand pear	poirier japonais	China-Birne, Nashi-Birne, Sandbirnbaum	pera
Pyrus ussuriensis Maxim. & Rupr.	Harbin pear, Ussurian pear		Ussuri-Birne	
Hybrids between *Pyrus pyrifolia* and *Pyrus ussuriensis, Pyrus pyrifolia* (Burm. f.) Nakai × *Pyrus ussuriensis* Maxim.				

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.

Other associated UPOV documents : TG/169/3 + Corr. Pyrus Rootstocks

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1. Subject of these Test Guidelines

These Test Guidelines apply to all varieties of *Pyrus pyrifolia* (Burm. f.) Nakai, *Pyrus ussuriensis* Maxim. & Rupr. and hybrids between *Pyrus pyrifolia* and *Pyrus ussuriensis,* except for varieties used only as rootstock vatieties (see TG/169/3 + Corr.).

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 trees grafted on rootstocks specified by the competent authority.

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

(a) varieties resulting from crossing: 5
(b) varieties resulting from mutation: 10

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 trees 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

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 Because daylight varies, color determinations made against a color chart should be made either in a suitable cabinet providing artificial daylight or in the middle of the day in a room without direct sunlight. The spectral distribution of the illuminant for artificial daylight should conform with the CIE Standard of Preferred Daylight D 6500 and should fall within the tolerances set out in the British Standard 950, Part I. These determinations should

be made with the plant part placed against a white background. The color chart and version used should be specified in the variety description.

3.4 Test Design

3.4.1 In the case of varieties resulting from crossing, each test should be designed to result in a total of at least 5 plants.

3.4.2 In the case of varieties resulting from mutation, each test should be designed to result in a total of at least 10 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 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. 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 varieties resulting from crossing, 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.

4.2.4 For the asseement of uniformity of varieties resulting from mutation, a population standard of 1% and an acceptance probability of at least 95% should be applied. In the case of a sample size of 10 plants, 1 off-type is 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) Fruit: weight (characteristic 30)
(b) Fruit: shape in lateral view (characteristic 34)
(c) Fruit: ground color of skin (characteristic 35)
(d) Fruit: relative area of over color (characteristic 36)
(e) Fruit: over color (characteristic 37)
(f) Fruit: relative area of russet (characteristic 38)
(g) Time of beginning of flowering (characteristic 61)
(h) Time for harvest maturity (characteristic 62)

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.

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

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

		English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
1.	**(*)**	**QN**	**VG**						
		Tree: vigor							
		very weak							1
		weak						Yakumo	2
		medium						Hosui, Kosui, Shinseiki	3
		strong						Shinsui	4
		very strong							5
2.	**(*)**	**PQ**	**VG**	**(+)**	**(a)**				
		Tree: growth habit							
		fastigiate							1
		upright						Shinsui	2
		spreading						Niitaka	3
		drooping						Chojuro	4
		weeping							5
3.		**QN**	**MS/VG**	**(+)**	**(a)**				
		One-year-old shoot: length of internodes							
		short							1
		short to medium						Nijisseiki, Shinsui	2
		medium						Hosui	3
		medium to long						Kosui	4
		long							5
4.	**(*)**	**PQ**	**VG**		**(a)**				
		One-year-old shoot: color on sunny side							
		dark purple						Oharabeni	1
		brown						Chojuro, Niitaka	2
		orange brown							3
		greenish brown						Gold Nijisseiki	4
		blackish brown						Hosui	5

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
5.	**(*)**	**QN** **VG**	**(a)**				
		One-year-old shoot: density of lenticels					
		very few					1
		few				Choju	2
		medium				Gold Nijisseiki, Hosui, Kosui, Niitaka	3
		many				Shinko, Shinseiki	4
		very many					5
6.	**(*)**	**QN** **VG**	**(a)**				
		One-year-old shoot: size of lenticels					
		small				Chojuro, Shinseiki	1
		medium				Gold Nijisseiki, Hosui, Kosui	2
		large				Niitaka, Shinsui	3
7.		**QN** **VG**	**(a)**				
		One-year-old shoot: pubescence					
		absent or very weak				Hosui, Kosui	1
		weak					2
		medium				Shinko	3
		strong					4
		very strong				Gold Nijisseiki	5
8.	**(*)**	**QN** **VG**					
		Branch: number of spurs					
		few				Kosui	1
		few to medium					2
		medium				Hosui	3
		medium to many					4
		many				Gold Nijisseiki, Shinko, Shinsui	5

		English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
9.	**(*)**	**PQ**	**VG**	**(+)**					
		Vegetative bud: position relative to shoot							
		adpressed						Kosui, Shinsui	1
		slightly held out						Chojuro, Hosui, Nijisseiki	2
		markedly held out						Niitaka, Shinko	3
10.		**PQ**	**VG**	**(+)**					
		Vegetative bud: shape of apex							
		pointed						Gold Nijisseiki, Kosui	1
		slightly rounded						Hosui, Shinko	2
		strongly rounded						Shinsui	3
11.	**(*)**	**QN**	**VG**		**(a)**				
		One-year-old shoot: number of axillary flower buds							
		very few							1
		few						Gold Nijisseiki, Shinsui	2
		medium						Kosui, Shinseiki	3
		many						Chojuro, Hosui	4
		very many							5
12.	**(*)**	**PQ**	**VG**						
		Flower bud: shape							
		ovate						Chojuro, Gold Nijisseiki, Kosui	1
		narrow elliptic						Hosui	2
		broad elliptic						Shinsui	3
		round						Aikansui, Shinseiki	4
13.	**(*)**	**PQ**	**VG**						
		Young leaf: color of upper side							
		yellow green						Chikusui, Shinseiki	1
		greenish brown						Yakumo	2
		brown						Gold Nijisseiki, Hosui, Kosui	3
		red brown						Shinko, Shinsui	4

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
14.	**(*)**	**QN** **VG**					
		Young leaf: pubescence on lower side					
		absent or very weak					1
		weak				Hosui, Kosui, Shinsui	2
		medium				Aikansui, Chojuro, Niitaka	3
		strong				Gold Nijisseiki, Shinseiki	4
		very strong					5
15.	**(*)**	**QN** **MS/VG**	**(b)**				
		Leaf blade: length					
		very short					1
		very short to short					2
		short				Hosui, Shinsui	3
		short to medium					4
		medium				Gold Nijisseiki, Kosui	5
		medium to long					6
		long					7
		long to very long					8
		very long					9
16.	**(*)**	**QN** **MS/VG**	**(b)**				
		Leaf blade: width					
		very narrow					1
		very narrow to narrow					2
		narrow				Hosui, Shinko	3
		narrow to medium					4
		medium				Shinsui	5
		medium to broad					6
		broad				Niitaka	7
		broad to very broad					8
		very broad					9

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
17.	**(*)**	**QN MS/VG**	**(b)**				
		Leaf blade: ratio length/width					
		very low					1
		very low to low					2
		low				Niitaka	3
		low to medium					4
		medium				Hosui	5
		medium to high					6
		high					7
		high to very high					8
		very high					9
18.		**PQ VG**	**(+) (b)**				
		Leaf blade: incisions of margin					
		serrate					1
		dentate					2
		crenate					3
19.	**(*)**	**QN MS/VG**	**(b)**				
		Petiole: length					
		very short					1
		very short to short					2
		short				Niitaka, Shinko	3
		short to medium				Gold Nijisseiki	4
		medium				Tama	5
		medium to long					6
		long				Yakumo	7
		long to very long					8
		very long					9
20.		**QN MS/VG**	**(b)**				
		Petiole: ratio petiole length / leaf blade length					
		very low					1
		low				Kikusui, Niitaka	2
		medium				Hosui, Kosui	3
		high				Yakumo	4
		very high					5

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
21.	**(*)**	**QN MS/VG**					
		Inflorescence: number of flowers					
		few					1
		few to medium					2
		medium				Chojuro, Hosui, Shinsui	3
		medium to many					4
		many				Gold Nijisseiki, Kosui	5
22.	**(*)**	**PQ VG**					
		Petal: color of outer side just before opening of flower					
		white				Niitaka, Shinko, Shinseiki	1
		light pink				Hosui, Kosui, Shinsui	2
		medium pink				Choju	3
		light red				Oharabeni	4
23.	**(*)**	**QN MS/VG**		**(c)**			
		Flower: diameter					
		small				Atago	1
		small to medium					2
		medium				Chojuro, Gold Nijisseiki, Shinsui	3
		medium to large					4
		large				Hosui, Kosui	5
24.	**(*)**	**PQ VG**	**(+)**	**(c)**			
		Petal: shape					
		ovate				Hosui, Shinko	1
		elliptic				Kosui	2
		round				Chojuro, Gold Nijisseiki, Niitaka	3
25.		**QN VG**	**(+)**	**(c)**			
		Petal: number of notches on margin					
		absent or few				Aikansui, Niitaka	1
		medium				Gold Nijisseiki, Hosui, Kosui, Shinsui	2
		many				Chojuro, Shinseiki	3

		English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
26.	**(*)**	**QN**	**MS/VG**		**(c)**				
		Flower: number of stamens							
		very few							1
		few						Chojuro	2
		medium						Hosui, Niitaka	3
		many						Kikusui, Kosui	4
		very many							5
27.		**QN**	**VG**	**(+)**					
		Anther: intensity of red color							
		light						Kosui, Niitaka	1
		medium						Hosui, Shinsui	2
		dark						Gold Nijisseiki, Shinko	3
28.	**(*)**	**QL**	**VG**						
		Anther: pollen							
		absent						Ishiiwase, Kumoi, Niitaka	1
		present						Chojuro, Hosui, Kosui, Nijisseiki, Shinsui	9
29.		**QN**	**VG**		**(c)**				
		Pedicel: pubescence							
		very weak							1
		weak							2
		medium						Hosui, Kosui	3
		strong						Nijisseiki, Shinko, Shinseiki	4
		very strong							5

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
30.	**(*)**	**QN** **MG/MS**	**(d)**				
		Fruit: weight					
		very low					1
		very low to low					2
		low				Shinsui	3
		low to medium					4
		medium				Chojuro, Gold Nijisseiki, Kosui	5
		medium to high					6
		high				Hosui, Shinko	7
		high to very high				Niitaka	8
		very high				Atago	9
31.	**(*)**	**QN** **MS/VG**	**(+)** **(d)**				
		Fruit: height					
		very short					1
		very short to short					2
		short				Shinsui	3
		short to medium					4
		medium				Kosui	5
		medium to tall				Gold Nijisseiki, Hosui	6
		tall				Niitaka, Shinko	7
		tall to very tall				Atago	8
		very tall					9
32.	**(*)**	**QN** **MS/VG**	**(+)** **(d)**				
		Fruit: diameter					
		very small					1
		very small to small					2
		small					3
		small to medium				Shinsui	4
		medium				Gold Nijisseiki, Kosui	5
		medium to large					6
		large				Hosui, Shinko	7
		large to very large				Niitaka	8
		very large				Atago	9

		English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
33.	**(*)**	**QN**	**MS/VG**	**(+)**	**(d)**				
		Fruit: ratio height/diameter							
		very low							1
		very low to low							2
		low						Shinsui	3
		low to medium						Atago, Hosui, Kosui, Niitaka	4
		medium						Gold Nijisseiki, Shinko	5
		medium to high							6
		high							7
		high to very high							8
		very high							9
34.	**(*)**	**PQ**	**VG**	**(+)**	**(d)**				
		Fruit: shape in lateral view							
		ovate							1
		narrow elliptic							2
		broad elliptic						Yakumo	3
		circular						Hosui	4
		oblate						Shinsui	5
		obovate						Yasato	6
35.	**(*)**	**PQ**	**VG**		**(d)**				
		Fruit: ground color of skin							
		not visible						Hosui, Niitaka, Shinko	1
		yellow							2
		green							3
		light yellow green						Yakumo	4
		dark yellow green						Gold Nijisseiki	5

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
36.	**(*)**	**PQ** **VG**					
		Fruit: relative area of over color					
		absent or 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
37.	**(*)**	**PQ** **VG**					
		Fruit: over color					
		orange					1
		orange red					2
		pink red				PremP109	3
		light red					4
		deep red					5
38.	**(*)**	**PQ** **VG**	**(+)** **(d)**				
		Fruit: relative area of russet					
		absent or very small				Gold Nijisseiki	1
		small					2
		medium				Chikusui	3
		large				Kosui	4
		very large				Hosui, Niitaka, Shinko	5
39.	**(*)**	**PQ** **VG**	**(d)**				
		Fruit: color of russet					
		yellow brown				Chikusui	1
		yellowish red brown				Hosui, Kosui, Shinko	2
		red brown				Chojuro	3

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
40.	**(*)**	**QN** **VG**	**(d)**				
		Fruit: texture of russet					
		very smooth					1
		smooth				Shinsui	2
		medium				Kosui, Niitaka, Shinko	3
		rough				Hosui	4
		very rough					5
41.	**(*)**	**QN** **VG**	**(d)**				
		Fruit: size of lenticels					
		small				Shinseiki, Yakumo	1
		small to medium					2
		medium				Gold Nijisseiki, Hosui, Kosui, Niitaka	3
		medium to large					4
		large				Kimizuka Wase	5
42.	**(*)**	**QN** **VG**	**(d)**				
		Fruit: density of lenticels					
		very sparse					1
		sparse					2
		medium				Kosui, Shinko	3
		dense				Gold Nijisseiki, Hosui, Niitaka	4
		very dense					5
43.	**(*)**	**QN** **MG/MS/VG**	**(+)** **(d)**				
		Fruit: depth of stalk cavity					
		shallow					1
		shallow to medium				Gold Nijisseiki	2
		medium				Kosui	3
		medium to deep					4
		deep					5

		English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
44.	**(*)**	**QN**	**MG/MS/VG**	**(+)**	**(d)**				
		Fruit: depth of calyx basin							
		shallow							1
		shallow to medium						Aikansui	2
		medium						Hosui	3
		medium to deep						Shinsui	4
		deep							5
45.	**(*)**	**QN**	**MG/MS/VG**	**(+)**	**(d)**				
		Fruit: width of stalk cavity							
		narrow							1
		narrow to medium							2
		medium						Gold Nijisseiki, Hosui	3
		medium to broad						Shinko	4
		broad						Aikansui	5
46.	**(*)**	**QN**	**MG/MS/VG**	**(+)**	**(d)**				
		Fruit: width of calyx basin							
		narrow							1
		narrow to medium						Chikusui	2
		medium						Gold Nijisseiki, Hosui	3
		medium to broad							4
		deep						Kosui, Niitaka, Shinsui	5
47.		**QN**	**VG**	**(+)**	**(d)**				
		Fruit: tendency to form fruits with persistent calyx							
		absent or weak						Gold Nijisseiki, Hosui, Kosui	1
		medium						Yasato	2
		strong						Akizuki	3

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
48.	**(*)**	**QN MS/VG**	**(d)**				
		Fruit: length of stalk					
		short				Chikusui	1
		short to medium					2
		medium				Gold Nijisseiki, Hosui, Kosui	3
		medium to long					4
		long				Okusankichi	5
49.	**(*)**	**QN MS/VG**	**(+) (d)**				
		Fruit: thickness of stalk					
		thin				Hosui	1
		thin to medium					2
		medium				Kosui, Niitaka	3
		medium to thick					4
		thick				Gold Nijisseiki	5
50.	**(*)**	**QL VG**	**(+) (d)**				
		Fruit: swelling of stalk					
		absent				Hosui, Niitaka, Shinko	1
		present				Gold Nijisseiki, Kosui	9
51.	**(*)**	**PQ VG**	**(+) (d)**				
		Fruit: shape of core					
		narrow ovate				Yakumo	1
		broad ovate				Kosui	2
		narrow spindle-shaped				Kumoi	3
		broad spindle-shaped				Gold Nijisseiki, Hosui, Niitaka	4
52.	**(*)**	**QN MS/VG**	**(+) (d)**				
		Fruit: ratio width of core/diameter of fruit					
		very small					1
		small				Kosui	2
		medium				Gold Nijisseiki, Hosui	3
		large				Shinko	4
		very large					5

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
53.	**(*)**	**QL** **VG**	**(d)**				
		Fruit: number of locules					
		only 5				Gold Nijisseiki, Hosui, Niitaka	1
		more than 5				Kosui	2
54.	**(*)**	**PQ** **VG**	**(d)**				
		Fruit: color of flesh					
		white				Hosui, Niitaka	1
		yellowish white				Gold Nijisseiki	2
		whitish yellow				Shinko	3
		pinkish					4
55.	**(*)**	**QN** **MS/VG**	**(+)** **(d)**				
		Fruit: firmness of flesh					
		soft				Gold Nijisseiki, Kosui	1
		soft to medium					2
		medium				Niitaka	3
		medium to firm					4
		firm				Chojuro	5
56.		**QN** **VG**	**(d)**				
		Fruit: texture of flesh					
		fine				Hosui, Kosui	1
		fine to medium					2
		medium				Shinko, Shinsui	3
		medium to coarse					4
		coarse				Chojuro	5
57.		**QN** **MG**	**(+)** **(d)**				
		Fruit: sweetness					
		very low					1
		low				Kumoi	2
		medium				Gold Nijisseiki, Shinko	3
		high				Hosui, Shinsui	4
		very high					5

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
58.		**QN MG**	**(+) (d)**				
		Fruit: acidity					
		very low					1
		low				Kosui	2
		medium				Shinsui	3
		high				Hosui	4
		very high					5
59.		**QN MS/VG**	**(d)**				
		Seed: size					
		small					1
		small to medium				Chikusui	2
		medium				Gold Nijisseiki, Hosui, Kosui	3
		medium to large				Niitaka	4
		large					5
60.		**PQ VG**	**(+) (d)**				
		Seed: shape					
		broad ovate				Gold Nijisseiki, Hosui, Niitaka	1
		narrow ovate				Shinko	2
		sickle shaped					3
61.	**(*)**	**QN VG**	**(+)**				
		Time of beginning of flowering					
		very early					1
		very early to early					2
		early				Niitaka	3
		early to medium					4
		medium				Gold Nijisseiki, Hosui, Shinsui	5
		medium to late					6
		late				Kosui, Okusankichi	7
		late to very late					8
		very late					9

		English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
62.	**(*)**	**QN**	**VG**	**(+)**					
		Time for harvest maturity							
		very early							1
		very early to early						Aikansui	2
		early						Shinsui	3
		early to medium							4
		medium						Gold Nijisseiki, Hosui	5
		medium to late							6
		late						Niitaka	7
		late to very late						Shinko	8
		very late						Okusankichi	9
63.		**QL**	**VG**	**(+)**					
		Self-compatibility							
		absent						Gold Nijisseiki, Hosui, Kosui, Niitaka	1
		present						Osa Gold, Osa Nijisseiki	9
64.		**QL**	**VG**	**(+)**					
		Resistance to black spot (*Alternaria alternata* Japanese pear pathotype)							
		absent						Nansui, Nijisseiki, Osa Nijisseiki, Shinsui	1
		present						Hosui, Kosui, Niitaka	9

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 during winter on trees that have fruited at least once.

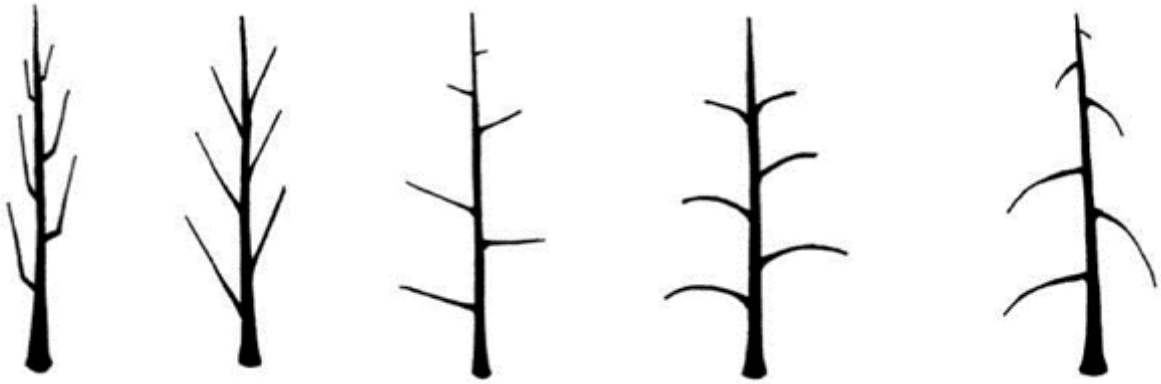
(b) Observations should be made on fully developed leaves from the middle third of current season shoot.

(c) Observations should be made on fully developed flowers at the beginning of anther dehiscence.

(d) Observations should be made on fruits at harvest maturity.

8.2 Explanations for individual characteristics

Ad. 2: Tree: growth habit

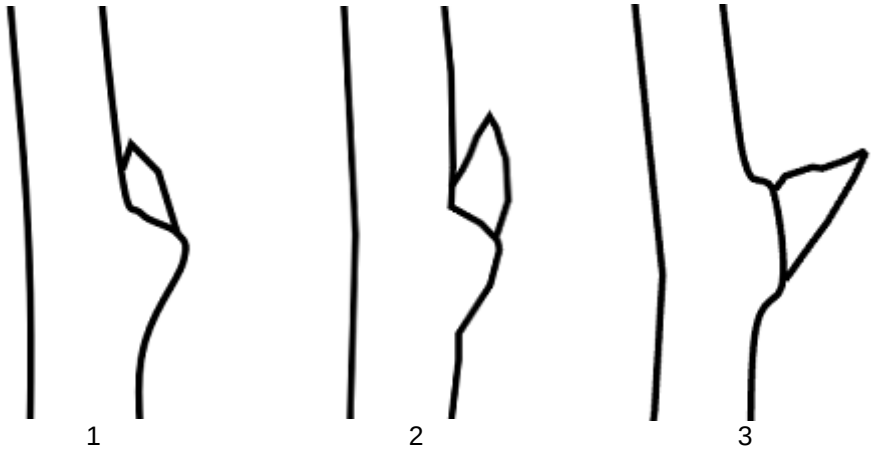


1 fastigiate | 2 upright | 3 spreading | 4 drooping | 5 weeping

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

Observation should be made on the middle third of the shoot.

Ad. 9: Vegetative bud: position relative to shoot

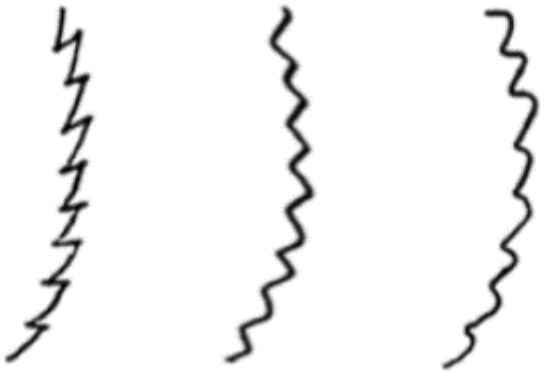


1 adpressed | 2 slightly held out | 3 markedly held out

Ad. 10: Vegetative bud: shape of apex

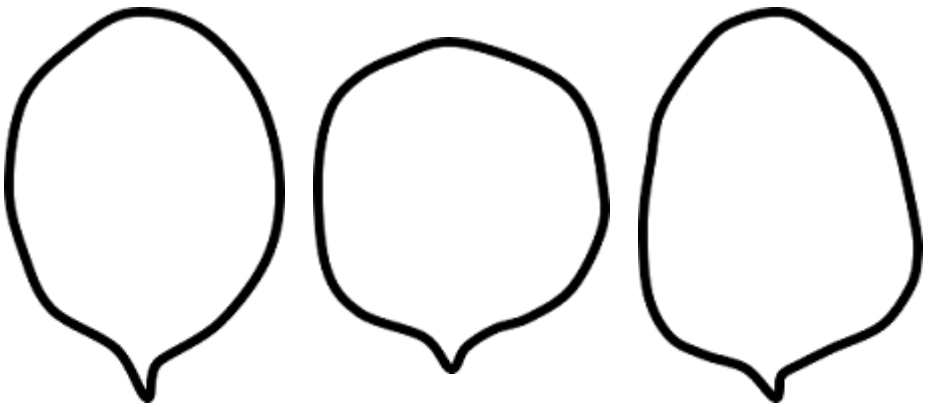
1 pointed | 2 slightly rounded | 3 strongly rounded

Ad. 18: Leaf blade: incisions of margin



1 serrate | 2 dentate | 3 crenate

Ad. 24: Petal: shape



1 elliptic | 2 round | 3 ovate

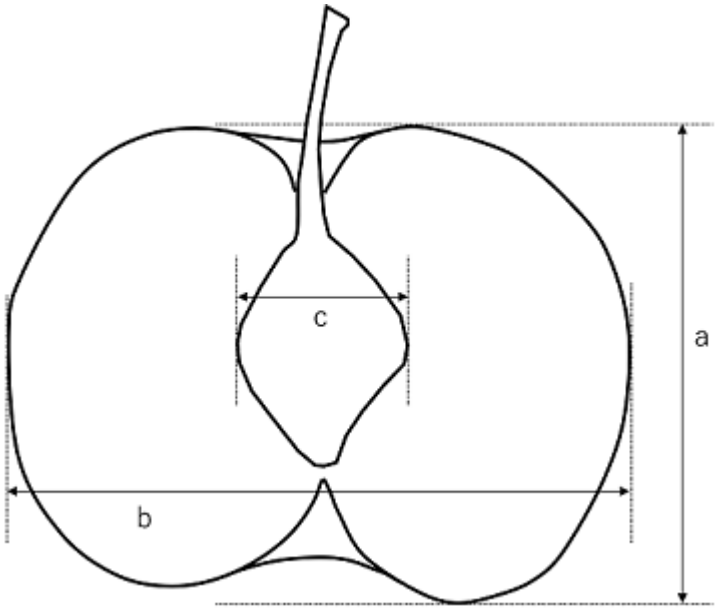
Ad. 25: Petal: number of notches on margin

1	2	3
absent or few	medium	many

Ad. 27: Anther: intensity of red color

Observations should be made before dehiscence.

Ad. 31: Fruit: height



a= Fruit: height
b= Fruit: diameter
a/b= Fruit: ratio height/diameter
c/b= Fruit: ratio width of core/diameter of fruit

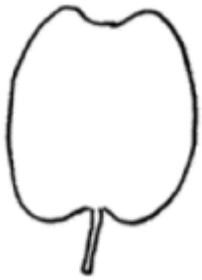
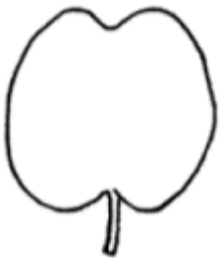
Ad. 32: Fruit: diameter

See Ad. 31

Ad. 33: Fruit: ratio height/diameter

See Ad. 31

Ad. 34: Fruit: shape in lateral view

ratio length/width	← broadest part →		
	below middle	at middle	above middle
high		 2 narrow elliptic	
medium		 3 broad elliptic	
	 1 ovate	 4 round	 6 obobate
low		 5 oblate	

Ad. 38: Fruit: relative area of russet

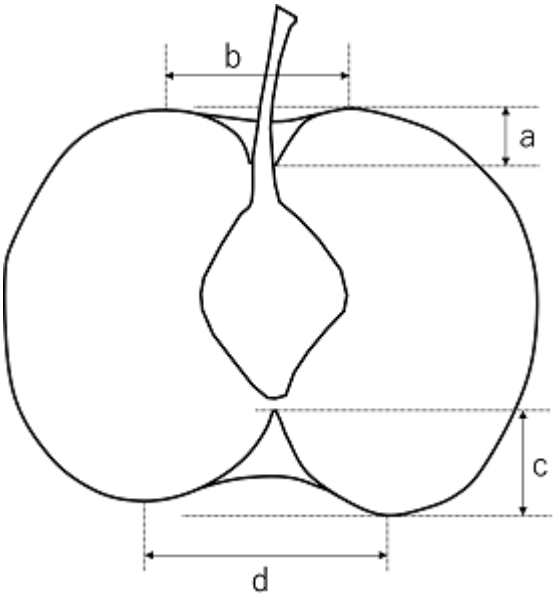
1
absent or small

2
intermediate

3
whole surface

(1) absent or small: The part of the skin that is covered with russet is either not at all or only partially.
(2) intermediate: Approximately half or more of the skin is covered with russet, but not the entire surface.
(3) whole surface: The entire surface of the skin is covered with russet.

Ad. 43: Fruit: depth of stalk cavity



a= Fruit: depth of stalk cavity
b= Fruit: width of stalk cavity
c= Fruit: depth of calyx basin
d= Fruit: width of calyx basin

Ad. 44: Fruit: depth of calyx basin

See Ad. 42

Ad. 45: Fruit: width of stalk cavity

See Ad. 42

Ad. 46: Fruit: width of calyx basin

See Ad. 42

Ad. 47: Fruit: tendency to form fruits with persistent calyx

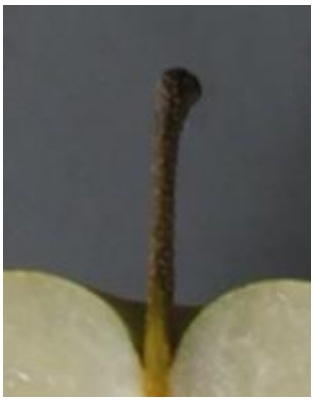
(1) absent or weak: Fruits with persistent calyx are none or very few.
(2) medium: Fruits with persistent calyx are sometimes present.
(3) strong: All or most of the fruits have persistent calyx.

Ad. 49: Fruit: thickness of stalk

Observation should be made on the middle of the stalk.

Ad. 50: Fruit: swelling of stalk

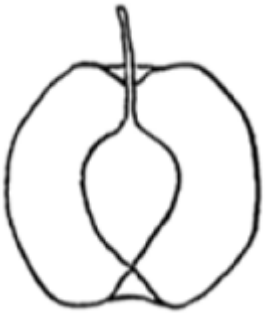
Observations should be made on the base of the stalk.



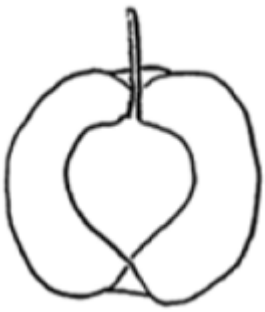
1
absent

9
present

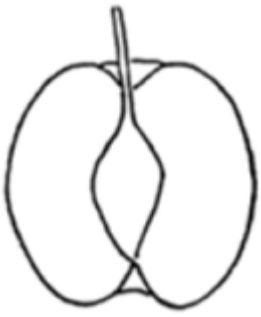
Ad. 51: Fruit: shape of core



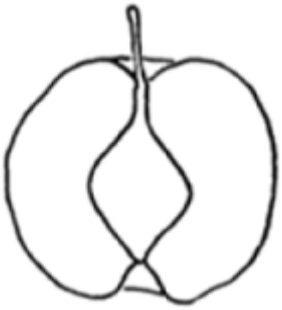
1
narrow ovate



2
broad ovate



3
narrow spindle-shaped



4
broad spindle-shaped

Ad. 52: Fruit: ratio width of core/diameter of fruit

See Ad. 31

Ad. 55: Fruit: firmness of flesh

Observation can be made by measurement using penetrometer.

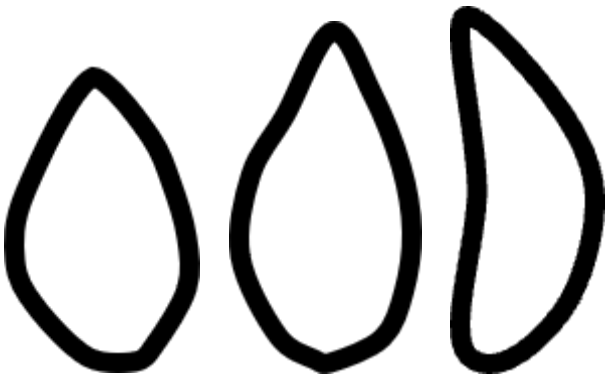
Ad. 57: Fruit: sweetness

Sweetness can be determined by measurement using a refractometer.

Ad. 58: Fruit: acidity

The acidity can be determined by titration, pH meter, or tasting.

Ad. 60: Seed: shape



1 broad ovate | 2 narrow ovate | 3 sickle shaped

Ad. 61: Time of beginning of flowering

The time of beginning of flowering is reached when 10% of the flowers are fully open.

Ad. 62: Time for harvest maturity

Japanese pear fruits ripen on the tree and do not require post-harvest ripening. The time of harvest maturity is reached when the fruit has reached its optimum flavor.

Ad. 63: Self-compatibility

Many of Japanese pear varieties are self-incompatible, and require artificial pollination with pollen from other varieties.
Self-compatibility can be determined by the ratio of fruit set by self-pollination.
Just after opening, the flowers should be self-pollinated artificially, and bagged.
After 90 days, observe the ratio shown below.
(Number of fruit set / Number of flowers artificially self-pollinated)
Self-compatible varieties show a fruiting ratio of 30% or more, and self-incompatible varieties set fruits less than 30%.

Ad. 64: Resistance to black spot (*Alternaria alternata* Japanese pear pathotype)

1.	Pathogen	*Alternaria alternata* Japanese pear pathotype
2.	Quarantine status	
3.	Host species	Japanese Pear - *Pyrus pyrifolia* (Burm. f.) Nakai var. *culta* (Mak.) Nakai
4.	Source of inoculum	MAFF (JP)
5.	Isolate	(To be added)
6.	Establishment isolate identity	resistant and susceptible controls
7.	Establishment pathogenicity	Test on susceptible plants
8.	Multiplication inoculum	
8.1	Multiplication medium	Potato dextrose agar
9.	Format of the test	
9.1	Number of plants per genotype	3
9.2	Number of replicates	See 10.4
9.3	Control varieties	Susceptible controls: Nansui, Njisseiki, Osa Nijisseiki, Shinsui Resistant controls: Hosui, Niitaka
9.5	Test facility	Petri dishes in an incubator
9.6	Temperature	25°C all day
10.	Inoculation	
10.2	Quantification inoculum	2.5 x 10^4 spores/ml
10.3	Plant stage at inoculation	Sampling from the second to the fourth leaf on the shoot towards the base (three leaves) per plant. The first leaf is determined as the leaf that has just unfolded at the top of a new shoot.
10.4	Inoculation method	Two filter papers are moistened in petri dishes with distilled and sterilized water. Leaf disks are detachedly arranged on the papers. 4-6 drops of the spore suspension (about 40 ul per drop) are placed on each leaf.
10.7	Final observations	4 days after inoculation
11.	Observations	
11.1	Method	Visual
11.2	Observation scale	resistant = no symptoms susceptible = necrosis on the marginal zone or whole surface
11.3	Validation of test	Evaluation of variety resistance should be calibrated with results of resistant and susceptible controls.
12.	Interpretation of data in terms of UPOV characteristic states	Absent (susceptible) [1] Present (resistant) [9]

9. Literature

Abe, K., Kurihara A., 1993: Species and varietal differences in scab resistance of pear. Journal of the Japanese Society for Horticultural Science. JP, PP. 789-794.

Nishio, S. et al., 2022: Marker-assisted Selection of Agronomically Important Traits in Japanese Pear Breeding Programs. Hort. Res. JP, 21(2), pp. 137-147.

Saito, T. et al., 2021: New Japanese pear cultivar 'Hoshiakari'. Journal of the NARO Research and Development (7). JP, pp. 21-28.

Saito, T. et al., 2021: New Japanese pear cultivar 'Narumi'. Journal of the NARO Research and Development (7). JP, pp. 29-37.

Kanahama, K., 2015: The fruit horticulture. Buneido Publishing Co., Ltd. Tokyo, JP, pp. 125-158.

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	*Pyrus pyrifolia* (Burm. f.) Nakai	☐
1.1.2	Common name	Japanese Pear	
1.2.1	Botanical name	*Pyrus ussuriensis* Maxim. & Rupr.	☐
1.2.2	Common name	Ussurian Pear	
1.3.1	Botanical name	Hybrids between *Pyrus pyrifolia* and *Pyrus ussuriensis*.	☐
1.3.2	Common name		
1.4.1	Botanical name	Species (please indicate)	☐
1.4.2	Common name		

2. Applicant

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

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

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) In vitro propagation [ ]
(b) Budding or grafting [ ]
(c) 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 (2)	**Tree: growth habit**		
	fastigiate		1 [ ]
	upright	Shinsui	2 [ ]
	spreading	Niitaka	3 [ ]
	drooping	Chojuro	4 [ ]
	weeping		5 [ ]
5.2 (8)	**Branch: number of spurs**		
	few	Kosui	1 [ ]
	few to medium		2 [ ]
	medium	Hosui	3 [ ]
	medium to many		4 [ ]
	many	Gold Nijisseiki, Shinko, Shinsui	5 [ ]
5.3 (11)	**One-year-old shoot: number of axillary flower buds**		
	very few		1 [ ]
	few	Gold Nijisseiki, Shinsui	2 [ ]
	medium	Kosui, Shinseiki	3 [ ]
	many	Chojuro, Hosui	4 [ ]
	very many		5 [ ]
5.4 (13)	**Young leaf: color of upper side**		
	yellow green	Chikusui, Shinseiki	1 [ ]
	greenish brown	Yakumo	2 [ ]
	brown	Gold Nijisseiki, Hosui, Kosui	3 [ ]
	red brown	Shinko, Shinsui	4 [ ]

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

	Characteristics	Example Varieties	Note
5.5 (15)	**Leaf blade: length**		
	very short		1 [ ]
	very short to short		2 [ ]
	short	Hosui, Shinsui	3 [ ]
	short to medium		4 [ ]
	medium	Gold Nijisseiki, Kosui	5 [ ]
	medium to long		6 [ ]
	long		7 [ ]
	long to very long		8 [ ]
	very long		9 [ ]
5.6 (30)	**Fruit: weight**		
	very low		1 [ ]
	very low to low		2 [ ]
	low	Shinsui	3 [ ]
	low to medium		4 [ ]
	medium	Chojuro, Gold Nijisseiki, Kosui	5 [ ]
	medium to high		6 [ ]
	high	Hosui, Shinko	7 [ ]
	high to very high	Niitaka	8 [ ]
	very high	Atago	9 [ ]
5.7 (34)	**Fruit: shape in lateral view**		
	ovate		1 [ ]
	narrow elliptic		2 [ ]
	broad elliptic	Yakumo	3 [ ]
	circular	Hosui	4 [ ]
	oblate	Shinsui	5 [ ]
	obovate	Yasato	6 [ ]

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

	Characteristics	Example Varieties	Note
5.8 (35)	**Fruit: ground color of skin**		
	not visible	Hosui, Niitaka, Shinko	1 [ ]
	yellow		2 [ ]
	green		3 [ ]
	light yellow green	Yakumo	4 [ ]
	dark yellow green	Gold Nijisseiki	5 [ ]
5.9 (36)	**Fruit: relative area of over color**		
	absent or 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 [ ]
5.10 (37)	**Fruit: over color**		
	orange		1 [ ]
	orange red		2 [ ]
	pink red	PremP109	3 [ ]
	light red		4 [ ]
	deep red		5 [ ]
5.11 (38)	**Fruit: relative area of russet**		
	absent or very small	Gold Nijisseiki	1 [ ]
	small		2 [ ]
	medium	Chikusui	3 [ ]
	large	Kosui	4 [ ]
	very large	Hosui, Niitaka, Shinko	5 [ ]
5.12 (39)	**Fruit: color of russet**		
	yellow brown	Chikusui	1 [ ]
	yellowish red brown	Hosui, Kosui, Shinko	2 [ ]
	red brown	Chojuro	3 [ ]

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

	Characteristics	Example Varieties	Note
5.13 (61)	**Time of beginning of flowering**		
	very early		1 [ ]
	very early to early		2 [ ]
	early	Niitaka	3 [ ]
	early to medium		4 [ ]
	medium	Gold Nijisseiki, Hosui, Shinsui	5 [ ]
	medium to late		6 [ ]
	late	Kosui, Okusankichi	7 [ ]
	late to very late		8 [ ]
	very late		9 [ ]
5.14 (62)	**Time for harvest maturity**		
	very early		1 [ ]
	very early to early	Aikansui	2 [ ]
	early	Shinsui	3 [ ]
	early to medium		4 [ ]
	medium	Gold Nijisseiki, Hosui	5 [ ]
	medium to late		6 [ ]
	late	Niitaka	7 [ ]
	late to very late	Shinko	8 [ ]
	very late	Okusankichi	9 [ ]
5.15 (63)	**Self-compatibility**		
	absent	Gold Nijisseiki, Hosui, Kosui, Niitaka	1 [ ]
	present	Osa Gold, Osa Nijisseiki	9 [ ]
	not tested		
5.16 (64)	**Resistance to black spot (*Alternaria alternata* Japanese pear pathotype)**		
	absent	Nansui, Nijisseiki, Osa Nijisseiki, Shinsui	1 [ ]
	present	Hosui, Kosui, Niitaka	9 [ ]
	not tested		

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	*One-year-old shoot: number of lenticels*	*few*	*many*

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.]

- Pollinizer:
  Good pollinizers are the following varieties:

.....

	absent	present	not tested
- Self-compatibility (62)	[ ]	[ ]	[ ]

- Resistance to pests and diseases

	absent	present	not tested
i) *Erwinia amylovora*	[ ]	[ ]	[ ]
ii) *Physalospora piricola* Nose	[ ]	[ ]	[ ]
iii) *Phomopsis fukushii* Tanaka et Endo	[ ]	[ ]	[ ]
iv) *Corynespora melonis*	[ ]	[ ]	[ ]

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]