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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

Geneva

DRAFT

EUROPEAN PEAR *

UPOV Code(s): PYRUS_COM

Pyrus communis L.

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 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

Alternative Names:*

Botanical name	*English*	*French*	*German*	*Spanish*
Pyrus communis L., *Pyrus asiae-mediae* (Popov) Maleev, *Pyrus balansae* Decne., *Pyrus bourgaeana* Decne., *Pyrus communis* L. subsp. *bourgaeana* (Decne.) Nyman, *Pyrus communis* L. var. *mariana* Willk., *Pyrus domestica* Medik., *Pyrus elata* Rubtzov, *Pyrus medvedevii* Rubtzov	European Pear, Pear	Poirier	Birne	Peral

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 (Pyrus rootstocks) and TG/149 (Japanese Pear)

* 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.]

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1. Subject of these Test Guidelines

These Test Guidelines apply to all varieties of *Pyrus communis* L. and its hybrids with other species of *Pyrus* L. [NZ: Consider to indicate PYRUS_BCO, _CPB, _CUS, and _LEC].

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, on a rootstock specified by the competent authority, or in the form of budsticks or graftwood.

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

(a) varieties resulting from crossing:
5 trees, budsticks or shoots for grafting;
(b) varieties resulting from mutation:
10 trees, budsticks or shoots for grafting.

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 The optimum stage of development for the assessment of each characteristic is indicated by a number in the Table of Characteristics. The stages of development denoted by each number are described in Chapter 8.

3.4 Test Design

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

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 trees.

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.

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.

4.3 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) Tree: growth habit (characteristic 2)
(b) Young shoot: intensity of pubescence (characteristic 9)
(c) Fruit: profile of sides (characteristic 36)
(d) Fruit: hue of over color (characteristic 38)
(e) Fruit: relative area of over color (characteristic 40)
(f) Fruit: pattern of over color (characteristic 41)
(g) Fruit: color of flesh (characteristic 56)
(h) Time of beginning of flowering (characteristic 58)
(i) Time of eating maturity (characteristic 60)

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. See chapter 8.4 for Synonyms of the example varieties

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**	**(+)**		**00 or 39**			
		Tree: vigor							
		very weak							1
		very weak to weak							2
		weak						Précoce de Trévoux	3
		weak to medium							4
		medium						Williams' Bon Chrétien	5
		medium to strong							6
		strong						Beurré d'Amanlis	7
		strong to very strong							8
		very strong							9
2.	**(*)**	**PQ**	**VG**	**(+)**	**(a)**	**00**			
		Tree: growth habit							
		fastigiate						Jeanne d'Arc	1
		upright						Beurré Clairgeau, Doyenné du Comice	2
		semi-upright						Colorée de Juillet, Nojabrskaja	3
		spreading						Madame Ballet	4
		drooping						Beurré Diel, Beurré Six	5
		weeping						Armida, Beurré d'Amanlis	6
3.	**(*)**	**QN**	**MG/VG**	**(+)**	**(b)**	**00**			
		One-year-old shoot: length of internode							
		very short							1
		short						Conference	2
		medium						Beurré Hardy, Jeanne d'Arc	3
		long						Pitmaston Duchesse d'Angoulême, Santa Maria	4
		very long							5

		English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
4.	**(*)**	**PQ**	**VG**		**(b)**	**00**			
		One-year-old shoot: predominant color on sunny side							
		grey green						Mirandino rosso, Nojabrskaja	1
		grey brown						Concorde	2
		orange brown						Eva Baltet	3
		light brown							4
		medium brown						Beurré Superfin, Précoce de Trévoux	5
		dark brown						Jeanne d'Arc	6
		brown red						Beurré Hardy, Louise Bonne d'Avranches	7
		brown purple						Nordhäuser Winterforelle	8
5.	**(*)**	**QN**	**MG/VG**	**(+)**	**(b)**	**00**			
		One-year-old shoot: number of lenticels							
		very few							1
		few						Triomphe de Vienne	2
		medium						Williams' Bon Chrétien	3
		many						Beurré d'Amanlis, Doyenné d'Alencon	4
		very many							5
6.	**(*)**	**QN**	**VG**	**(+)**	**(b)**	**00**			
		One-year-old shoot: position of vegeta-tive bud in relation to shoot							
		adpressed						Williams' Bon Chrétien	1
		slightly held out						Passe Crassane	2
		markedly held out						Conference, Épine du Mas	3
7.	**(*)**	**PQ**	**VG**	**(+)**	**(b)**	**00**			
		One-year-old shoot: shape of apex of vegetative bud							
		acute						Conference	1
		obtuse						Passe Crassane	2
		rounded						Jeanne d'Arc	3

		English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
8.	**(*)**	**QN**	**VG**	**(+)**		**32-35**			
		Young shoot: anthocyanin coloration of growing tip							
		absent or very weak						Clapp's Favourite, Poire de Charneu	1
		weak						Doyenné du Comice	2
		medium						Beurré Hardy	3
		strong						Red Bartlett	4
		very strong						Liegels Winterbutterbirne	5
9.		**QN**	**VG**			**32-35**			
		(NEW) Young shoot: intensity of pubescence							
		absent or very weak							1
		weak							2
		medium							3
		strong							4
		very strong							5
10.	**(*)**	**QN**	**MG/VG**	**(+)**	**(c)**	**71-77**			
		Leaf blade: length							
		very short							1
		very short to short							2
		short						Joséphine de Malines, Pierre Corneille	3
		short to medium							4
		medium						Beurré Hardy, Conference	5
		medium to long							6
		long						Passe Crassane, Triomphe de Vienne	7
		long to very long							8
		very long							9
11.	**(*)**	**QN**	**VG**	**(+)**	**(c)**	**71-77**			
		Leaf blade: attitude in relation to shoot							
		upwards						Citron des Carmes, Précoce de Trévoux	1
		outwards						Curé, Doyenné du Comice	2
		downwards						Beurré Giffard, Pitmaston Duchesse d'Angoulême	3

		English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
12.	**(*)**	**QN**	**MG/VG**	**(+)**	**(c)**	**71-77**			
		Leaf blade: width							
		very narrow							1
		very narrow to narrow							2
		narrow						Olivier de Serres	3
		narrow to medium							4
		medium						Williams' Bon Chrétien	5
		medium to broad							6
		broad						Curé	7
		broad to very broad							8
		very broad							9
13.	**(*)**	**QN**	**MG/VG**	**(+)**	**(c)**	**71-77**			
		Leaf blade: ratio length/width							
		very small						Curé	1
		very small to small							2
		small						Président Drouard	3
		small to medium							4
		medium						Conference, Williams' Bon Chrétien	5
		medium to broad							6
		large						Louise Bonne d'Avranches, Triomphe de Vienne	7
		broad to very large							8
		very large						Beurré Lebrun, Monchallard	9
14.		**PQ**	**VG**	**(+)**	**(c)**	**71-77**			
		Leaf blade: shape of base							
		acute						Beurré Giffard	1
		right-angled						Grand Champion, Santa Maria	2
		obtuse						Général Leclerc	3
		truncate						Doyenné du Comice	4
		cordate						Président Drouard	5

		English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
15.		**PQ**	**VG**	**(+)**	**(c)**	**71-77**			
		Leaf blade: shape of apex							
		acuminate						Premp 36	1
		acute						Conference	2
		right-angled						Williams' Bon Chrétien	3
		obtuse						Beurré Clairgeau	4
		rounded						Curé, Pitmaston Duchesse d'Angoulême	5
16.	**(*)**	**PQ**	**VG**	**(+)**	**(c)**	**71-77**			
		Leaf blade: incisions of margin							
		absent						Beurré Giffard	1
		crenate						Beurré d'Amanlis	2
		serrate						Alexandrine Douillard, Général Leclerc	3
17.		**QN**	**VG**		**(c)**	**71-77**			
		Leaf blade: depth of incisions of margin							
		very shallow							1
		shallow						Précoce de Trévoux, Williams' Bon Chrétien	2
		medium						Beurré Diel, Olivier de Serres	3
		deep						Pitmaston Duchesse d'Angoulême	4
		very deep							5
18.	**(*)**	**QN**	**VG**	**(+)**	**(c)**	**71-77**			
		Leaf blade: curvature of longitudinal axis							
		very weak							1
		weak						Précoce de Trévoux	2
		medium						Beurré Giffard, Épine du Mas	3
		strong						Comtesse de Paris, Doyenné d'Alencon	4
		very strong							5

		English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
19.	**(*)**	**QN**	**MG/VG**	**(+)**	**(c)**	**71-77**			
		Petiole: length							
		very short							1
		very short to short							2
		short						Épine du Mas	3
		short to medium							4
		medium						Beurré Hardy, Louise Bonne d'Avranches	5
		medium to long							6
		long						Triomphe de Vienne	7
		long to very long							8
		very long							9
20.	**(*)**	**QL**	**VG**		**(c)**	**71-77**			
		Petiole: presence of stipules							
		absent						Monchallard	1
		present						Doyenné du Comice	9
21.		**QN**	**VG**	**(+)**		**71-77**			
		Petiole: position of stipules							
		towards base of petiole							1
		in middle							2
		towards base of leaf blade							3
22.	**(*)**	**QN**	**MG/VG**			**55**			
		Flower bud: length							
		very short							1
		short						Beurré Alexandre Lucas, Williams' Bon Chrétien	2
		medium						Louise Bonne d'Avranches	3
		long						Beurré Bosc, Beurré Hardy	4
		very long							5

		English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
23.		**PQ**	**VG**						
		(NEW) Flower bud: shape							
		ovate							1
		narrow elliptic							2
		medium elliptic							3
		rounded							4
24.		**QN**	**MG/VG**		**(d)**	**60-65**			
		Flower: length of sepal							
		very short							1
		short						Olivier de Serres, Triomphe de Vienne	2
		medium						Beurré Hardy, Doyenné du Comice	3
		long						Curé, Pitmaston Duchesse d'Angoulême	4
		very long							5
25.		**PQ**	**VG**	**(+)**	**(d)**	**60-65**			
		Flower: attitude of sepals in relation to corolla							
		adpressed						Président Drouard	1
		spreading						Doyenné du Comice, Pitmaston Duchesse d'Angoulême	2
		recurved						Beurré d'Anjou, Beurré Giffard	3
26.	**(*)**	**QN**	**VG**	**(+)**	**(d)**	**60-65**			
		Flower: arrangement of petals							
		free						Beurré Bosc, Passe Crassane	1
		intermediate						Doyenné du Comice, Jeanne d'Arc	2
		overlapping						Conference, Docteur Jules Guyot	3
27.		**QN**	**VG**	**(+)**	**(d)**	**60-65**			
		Flower: position of stigmas relative to anthers							
		below						Bergamotte Esperen, Jeanne d'Arc	1
		same level						Alexandrine Douillard, Beurré Hardy	2
		above						Beurré d'Amanlis, Beurré Giffard	3

		English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
28.		**QN**	**MG/VG**		**(d)**	**60-65**			
		Flower: size of petal							
		very small							1
		small						Highland, Sierra	2
		medium						Williams' Bon Chrétien	3
		large						Concorde, Dita	4
		very large							5
29.	**(*)**	**PQ**	**VG**	**(+)**	**(d)**	**60-65**			
		Flower: shape of petal							
		transverse elliptic							1
		circular						Comtesse de Paris	2
		elliptic							3
		oblong							4
		narrow ovate						Beurré Hardy, Doyenné du Comice	5
		broad ovate						Beurré Bosc	6
30.	**(*)**	**QN**	**MG/VG**		**(e)**	**89**			
		Fruit: weight							
		very low						Petit Muscat, Précoce de Cassano	1
		very low to low							2
		low						Citron des Carmes, Doyenné de Juillet	3
		low to medium							4
		medium						Docteur Jules Guyot, Épine du Mas	5
		medium to high							6
		high						Doyenné du Comice, Passe Crassane	7
		high to very high							8
		very high						Margarete Marillat	9

		English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
31.	**(*)**	**QN**	**MG/VG**	**(+)**	**(e)**	**89**			
		Fruit: height							
		very short							1
		very short to short							2
		short						Olivier de Serres	3
		short to medium							4
		medium						Williams' Bon Chrétien	5
		medium to long							6
		long						Abbé Fétel	7
		long to very long							8
		very long							9
32.	**(*)**	**QN**	**MG/VG**	**(+)**	**(e)**	**89**			
		Fruit: diameter							
		very small							1
		very small to small							2
		small						Abbé Fétel	3
		small to medium							4
		medium						Williams' Bon Chrétien	5
		medium to large							6
		large						Jeanne d'Arc	7
		large to very large							8
		very large							9
33.	**(*)**	**QN**	**MG/VG**		**(e)**	**89**			
		Fruit: ratio height/ diameter							
		very small						Olivier de Serres, Passe Crassane	1
		very small to small							2
		small						Beurré d'Ahrenberg	3
		small to medium							4
		medium						Beurré Clairgeau, Williams' Bon Chrétien	5
		medium to large							6
		large						Conference	7
		large to very large							8
		very large						Abbé Fétel	9

		English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
34.	**(*)**	**QN**	**VG**	**(+)**	**(e)**	**89**			
		Fruit: position of maximum diameter							
		in middle						Bergamotte Esperen	1
		slightly towards calyx						Beurré Alexandre Lucas, Doyenné du Comice	2
		clearly towards calyx						Conference	3
35.		**QN**	**VG**	**(+)**	**(e)**	**89**			
		Fruit: symmetry in longitudinal section							
		symmetric						Passe Crassane	1
		slightly asymmetric						Beurré Bosc	2
		strongly asymmetric						Beurré Clairgeau, Nouveau Poiteau	3
36.	**(*)**	**PQ**	**VG**	**(+)**	**(e)**	**89**			
		Fruit: profile of sides							
		concave						Abbé Fétel, Beurré Bosc	1
		straight						Beurré Giffard	2
		convex						Doyenné d'Hiver, Olivier de Serres	3
37.	**(*)**	**PQ**	**VG**	**(+)**	**(e)**	**89**			
		Fruit: ground color							
		not visible						Grand Champion, Uta	1
		green						Nouveau Poiteau	2
		yellow green						Beurré Giffard, Beurré Hardy	3
		yellow						Président Drouard, Williams' Bon Chrétien	4
38.	**(*)**	**PQ**	**VG**	**(+)**	**(e)**	**89**			
		Fruit: hue of over color							
		orange						Précoce de Trévoux	1
		orange red						Duchesse Elsa	2
		pink red						Belle Angevine	3
		light red						Nordhäuser Winterforelle	4
		dark red						Starkrimson	5
		purple							6

		English			français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
39.	**(*)**	**QN**	**VG**		**(e)**	**89**				
		Fruit: intensity of over color								
		very light								1
		very light to light								2
		light								3
		light to medium								4
		medium								5
		medium to dark								6
		dark								7
		dark to very dark								8
		very dark								9
40.	**(*)**	**QN**	**VG**		**(e)**	**89**				
		Fruit: relative area of over color								
		absent or very small							Passe Crassane, Président Drouard	1
		very small to small								2
		small							Précoce de Trévoux	3
		small to medium								4
		medium							Nordhäuser Winterforelle	5
		medium to large								6
		large							Beurré Clairgeau	7
		large to very large								8
		very large							Starkrimson	9
41.	**(*)**	**PQ**	**VG**		**(e)**	**89**				
		Fruit: pattern of over color								
		only solid flush								1
		solid flush with stripes								2
		only stripes								3
		flushed and mottled								4

		English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
42.	**(*)**	**QN**	**VG**	**(+)**	**(e)**	**89**			
		Fruit: relative area of russet around stalk attachment							
		absent or very small						Curé	1
		very small to small							2
		small						Nordhäuser Winterforelle	3
		small to medium							4
		medium						Packham's Triumph	5
		medium to large							6
		large						Beurré Hardy	7
		large to very large							8
		very large						Madame Verté	9
43.		**QN**	**VG**	**(+)**	**(e)**	**89**			
		Fruit: relative area of russet on cheeks							
		absent or very small						Liegels Winterbutterbirne	1
		very small to small							2
		small						Beurré Alexandre Lucas	3
		smallt to medium							4
		medium						Comtesse de Paris	5
		medium to large							6
		large						Général Leclerc	7
		large to very large							8
		very large						Madame Verté	9
44.	**(*)**	**QN**	**VG**	**(+)**	**(e)**	**89**			
		Fruit: relative area of russet around eye basin							
		absent or very small						Liegels Winterbutterbirne	1
		very small to small							2
		small						Nordhäuser Winterforelle	3
		small to medium							4
		medium						Packham's Triumph	5
		medium to large							6
		large						Conference	7
		large to very large							8
		very large						Général Leclerc, Madame Verté	9

		English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
45.	**(*)**	**QN**	**MG/VG**		**(e)**	**89**			
		Fruit: length of stalk							
		very short							1
		very short to short							2
		short						Beurré des Enfants, Beurré d'Anjou	3
		short to medium							4
		medium						Alexandrine Douillard, Beurré Hardy	5
		medium to long							6
		long						Beurré Bosc, Curé	7
		long to very long							8
		very long							9
46.	**(*)**	**QN**	**MG/VG**		**(e)**	**89**			
		Fruit: thickness of stalk							
		very thin							1
		thin						Beurré Bosc, Concorde	2
		medium						Beurré Hardy, Williams' Bon Chrétien	3
		thick						Beurré d'Anjou, Clapp's Favourite	4
		very thick							5
47.		**QN**	**VG**			**89**			
		(NEW) Fruit: attitude of stalk to axis of fruit							
		straight							1
		oblique							2
		right-angled							3
48.		**QN**	**VG**	**(+)**	**(e)**	**89**			
		Fruit: curvature of stalk							
		absent or very weak						Président Drouard	1
		weak						Curé	2
		medium						Conference	3
		strong						Beurré Bosc	4
		very strong							5

		English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
49.	**(*)**	**QN**	**MG/VG**	**(+)**	**(e)**	**89**			
		Fruit: depth of stalk cavity							
		absent or very shallow						Beurré Giffard, Conference	1
		shallow						Louise Bonne d'Avranches	2
		medium						Épine du Mas, Précoce de Trévoux	3
		deep						Doyenné d'Hiver, Passe Crassane	4
		very deep						Olivier de Serres	5
50.	**(*)**	**QN**	**MG/VG**	**(+)**	**(f)**	**89**			
		Fruit: depth of eye basin							
		very shallow							1
		shallow						Comtesse de Paris, Précoce de Trévoux	2
		medium						Beurré Giffard, Beurré Hardy	3
		deep						Doyenné du Comice, Passe Crassane	4
		very deep							5
51.	**(*)**	**QN**	**MG/VG**	**(+)**	**(f)**	**89**			
		Fruit: width of eye basin							
		very narrow							1
		narrow						Épine du Mas, Williams' Bon Chrétien	2
		medium						Beurré Clairgeau, Beurré Hardy	3
		broad						Doyenné du Comice, Passe Crassane	4
		very broad							5
52.	**(*)**	**PQ**	**VG**		**(f)**	**89**			
		Fruit: relief of area around eye							
		smooth						Passe Crassane, Président Drouard	1
		slightly ribbed						Alexandrine Douillard, Williams' Bon Chrétien	2
		embossed						Beurré Clairgeau, Le Lectier	3

		English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
53.		**PQ**	**VG**	**(+)**	**(f)**	**89**			
		Fruit: attitude of sepals							
		converging						Beurré Alexandre Lucas, Le Lectier	1
		erect						Conference, Passe Crassane	2
		spreading						Comtesse de Paris, Curé	3
54.	**(*)**	**QN**	**VG**		**(e)**	**89**			
		Fruit: texture of flesh							
		very fine							1
		fine						Beurré Hardy, Grand Champion	2
		medium						Beurré Bosc, Président Drouard	3
		coarse						Curé, Tongre	4
		very coarse							5
55.	**(*)**	**QN**	**MG/VG**	**(+)**	**(e)**	**89**			
		Fruit: firmness of flesh							
		very soft							1
		soft						Jeanne d'Arc	2
		medium						Beurré Hardy, Poire de Charneu	3
		firm						Comtesse de Paris, Nordhäuser Winterforelle	4
		very firm							5
56.	**(*)**	**PQ**	**VG**		**(e)**	**89**			
		Fruit: color of flesh							
		white							1
		greenish							2
		yellowish							3
		pinkish							4
		reddish							5

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
57.		**QN** **MG/VG**	**(e)**	**89**			
		Fruit: juiciness of flesh					
		very dry					1
		dry				Mirandino rosso, Timpurri de Voinesti	2
		medium				Williams' Bon Chrétien	3
		juicy				Conference, Grand Champion	4
		very juicy				Doyenné du Comice, Robert de Neufville	5
58.	**(*)**	**QN** **MG/VG**	**(+)**				
		Time of beginning of flowering					
		very early				Beurré Alexandre Lucas, Pitmaston Duchesse d'Angoulême	1
		very early to early					2
		early				Delfrap, Louise Bonne d'Avranches	3
		early to medium					4
		medium				Packham's Triumph, Williams' Bon Chrétien	5
		medium to late					6
		late				Doyenné du Comice, Jeanne d'Arc	7
		late to very late					8
		very late				Frangipane	9
59.		**QN** **MG/VG**	**(+)**				
		Time for harvest					
		extremely early					1
		extremely early to very early					2
		very early					3
		very early to early					4
		early					5
		early to medium					6
		medium					7
		medium to late					8
		late					9
		late to very late					10
		very late					11
		very late to extremely late					12
		extremely late					13

		English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
60.	**(*)**	**QN**	**MG/VG**	**(+)**					
		Time of eating maturity							
		extremely early							1
		extremely early to very early							2
		very early						Doyenné de Juillet, Mirandino rosso	3
		very early to early							4
		early						Précoce de Trévoux	5
		early to medium							6
		medium						Coscia	7
		medium to late							8
		late						Beurré Hardy, Doyenné du Comice, Jeanne d'Arc	9
		late to very late							10
		very late						Doyenné d'Hiver, Nordhäuser Winterforelle, Président Drouard	11
		very late to extremely late							12
		extremely late							13

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 after at least one satisfactory crop of fruit.

(b) Observations should be made in the middle third of lateral dormant shoots in winter, after at least one satisfactory crop of fruit.

(c) Observations should be made on fully developed leaves from the middle third of vigorous vegetative current season shoots.

(d) Observations should be made on second or subsequent flowers, at the start of anther dehiscence.

(e) Observations should be made on fruits when they are eating ripe.

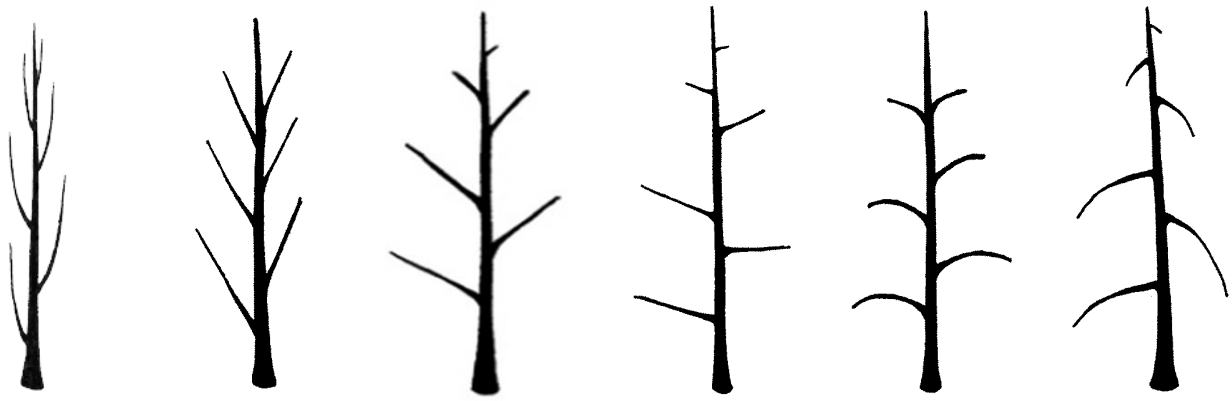
(f) Observations should be made on fruits at harvest.

8.2 Explanations for individual characteristics

Ad. 1: Tree: vigor

The vigor of the tree should be considered as the overall abundance of vegetative growth, after at least one satisfactory crop of fruit. It can either be assessed at the peak of vegetative growth in summer (growth stage 39), or during the dormant season before pruning (stage 00), considering shoot length and thickness, and trunk diameter.

Ad. 2: Tree: growth habit



1	2	3	4	5	6
fastigiate	upright	upright to spreading	spreading	drooping	weeping

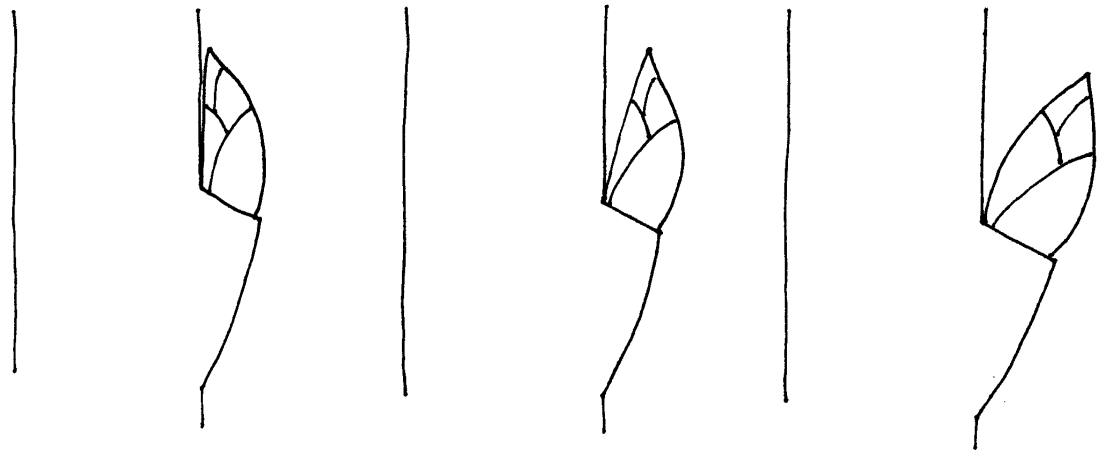
Ad. 3: One-year-old shoot: length of internode

Observations should be made using a vernier caliper gauge.

Ad. 5: One-year-old shoot: number of lenticels

Observations should be made by counting in a defined area [e.g. an area of 1 cm²] or by visual assessment of the density of lenticels on the bark.

Ad. 6: One-year-old shoot: position of vegeta-tive bud in relation to shoot

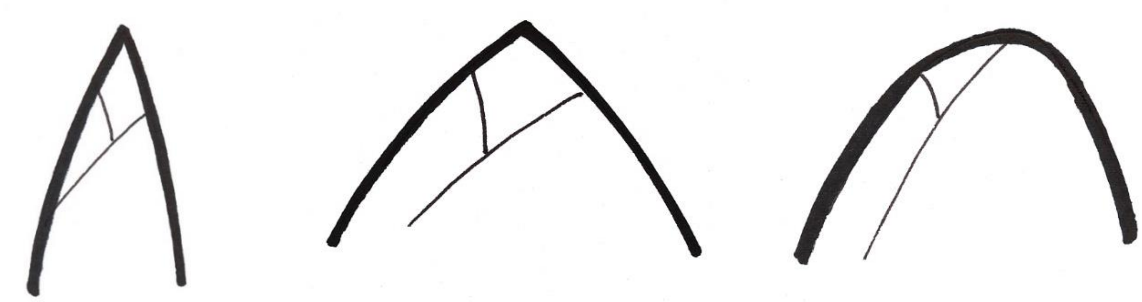


1
adpressed

2
slightly held out

3
markedly held out

Ad. 7: One-year-old shoot: shape of apex of vegetative bud



1
acute

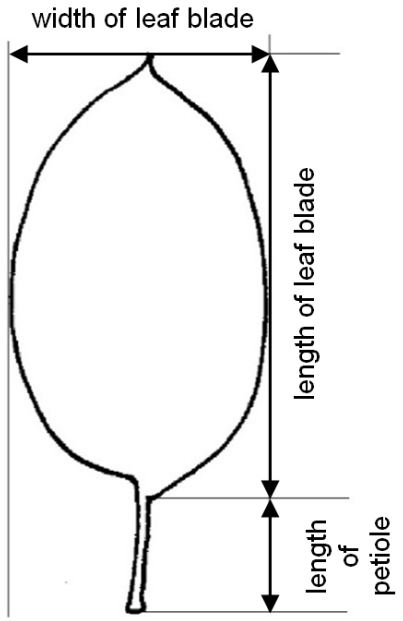
2
obtuse

3
rounded

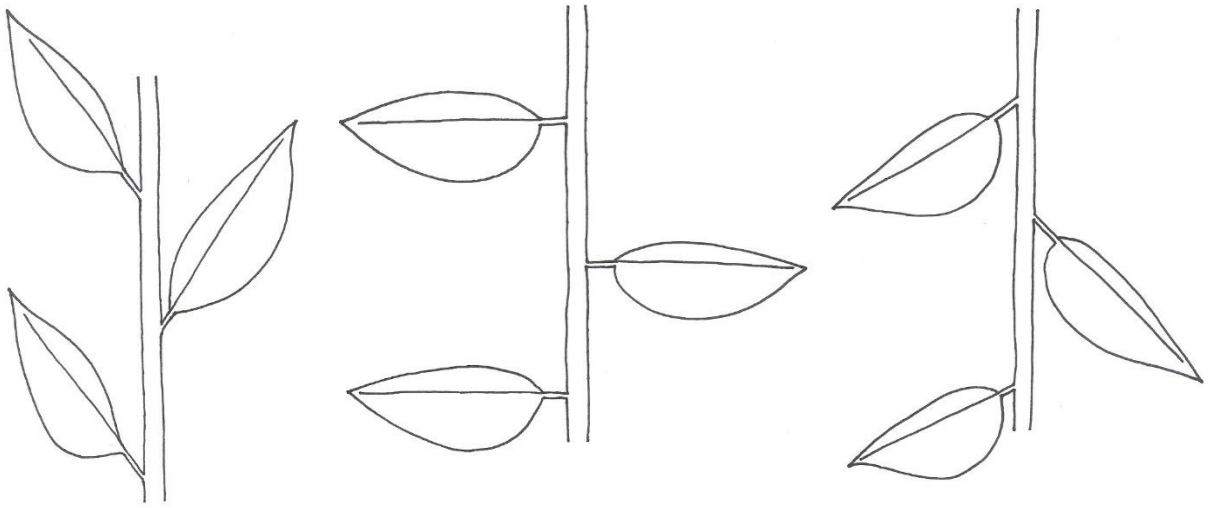
Ad. 8: Young shoot: anthocyanin coloration of growing tip

Observations should be made during rapid growth.

Ad. 10: Leaf blade: length



Ad. 11: Leaf blade: attitude in relation to shoot



1 upwards

2 outwards

3 downwards

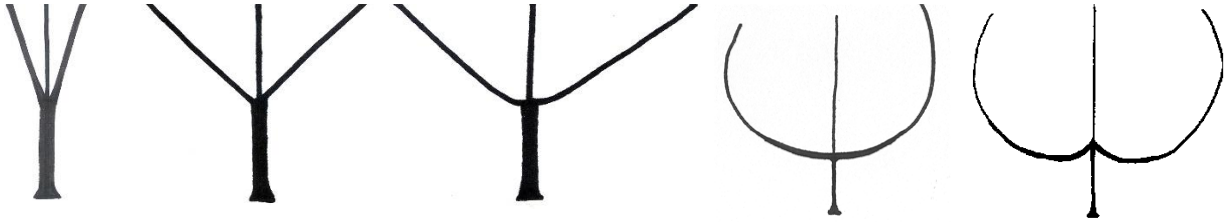
Ad. 12: Leaf blade: width

See Ad. 8

Ad. 13: Leaf blade: ratio length/width

See Ad. 8.

Ad. 14: Leaf blade: shape of base

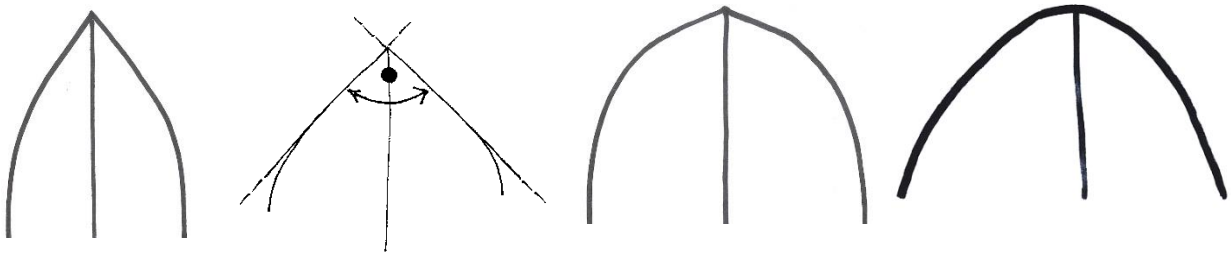


1 acute | 2 right-angled | 3 obtuse | 4 truncate | 5 cordate

To consider / to check if “truncate” really exists, or if “rounded” would be more appropriate, or if both shapes do exist.

Ad. 15: Leaf blade: shape of apex

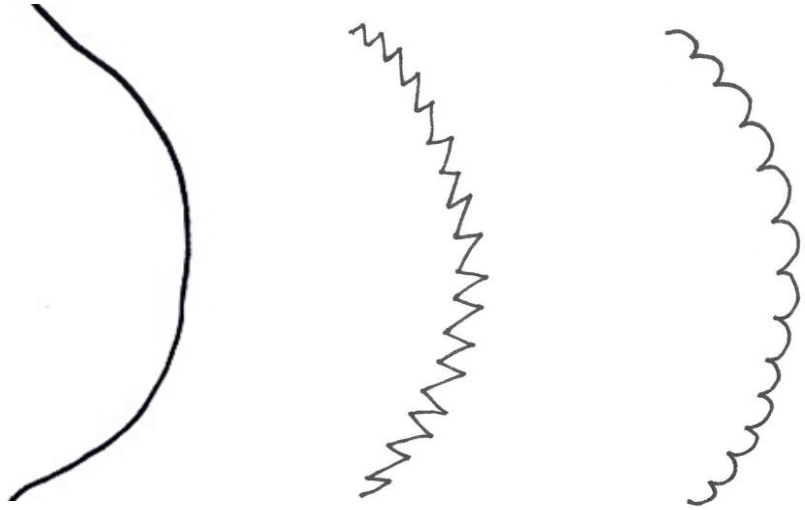
Observations should be made excluding the pointed tip.



1 acute | 2 right-angled | 3 obtuse | 4 rounded

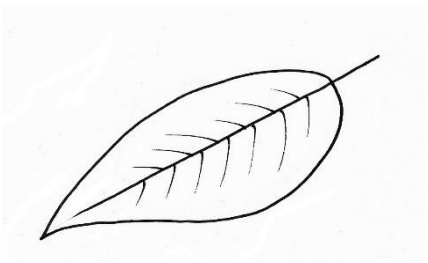
Ad. 16: Leaf blade: incisions of margin

The predominant type of incision at distal half should be observed.

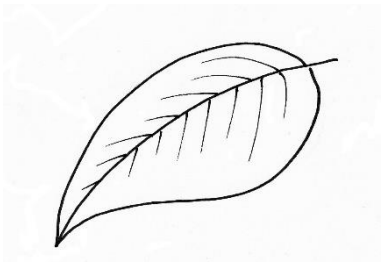


1 absent | 2 serrate | 3 crenate

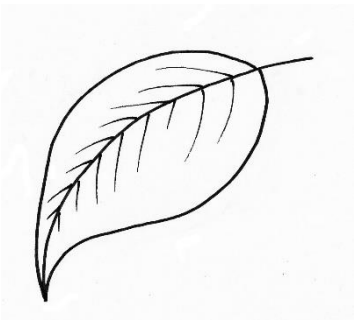
Ad. 18: Leaf blade: curvature of longitudinal axis



1
very weak



3
medium

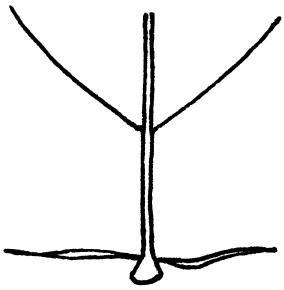


5
very strong

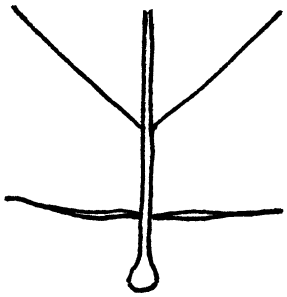
Ad. 19: Petiole: length

See Ad. 8.

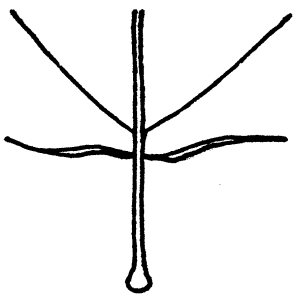
Ad. 21: Petiole: position of stipules



1
towards base of petiole

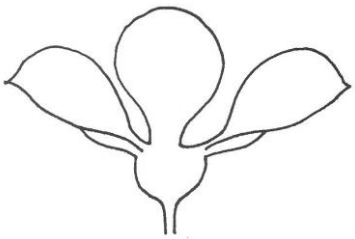


2
at middle

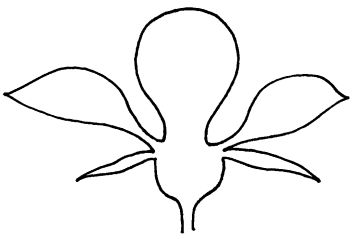


3
towards base of leaf blade

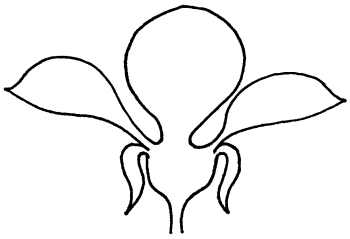
Ad. 25: Flower: attitude of sepals in relation to corolla



1
adpressed

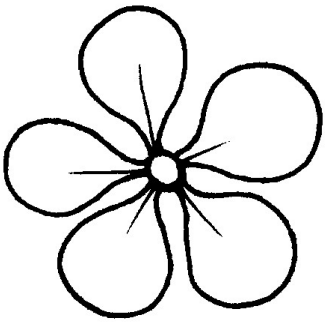


2
spreading

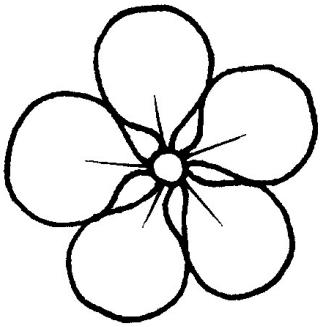


3
recurved

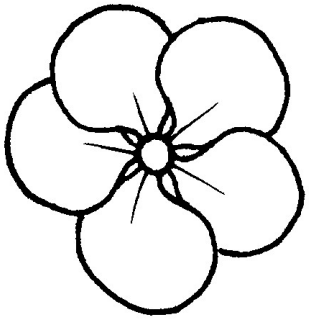
Ad. 26: Flower: arrangement of petals



1
free

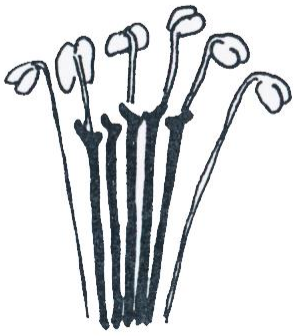


2
intermediate

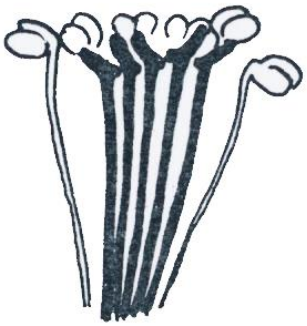


3
overlapping

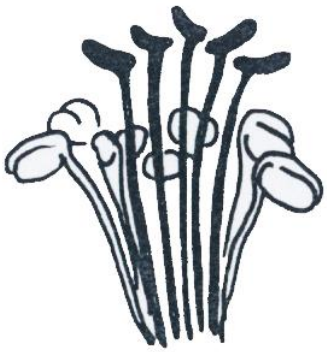
Ad. 27: Flower: position of stigmas relative to anthers



1
below



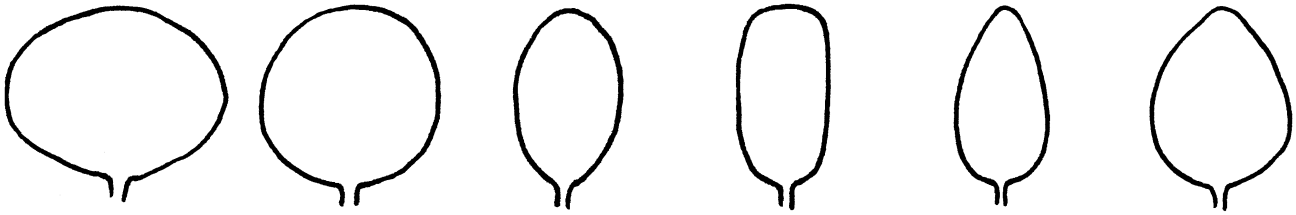
2
same level



3
above

Ad. 29: Flower: shape of petal

Observations should be made excluding the claw at the top of the petal.



1
transverse elliptic

2
circular

3
elliptic

4
oblong

5
narrow ovate

6
broad ovate

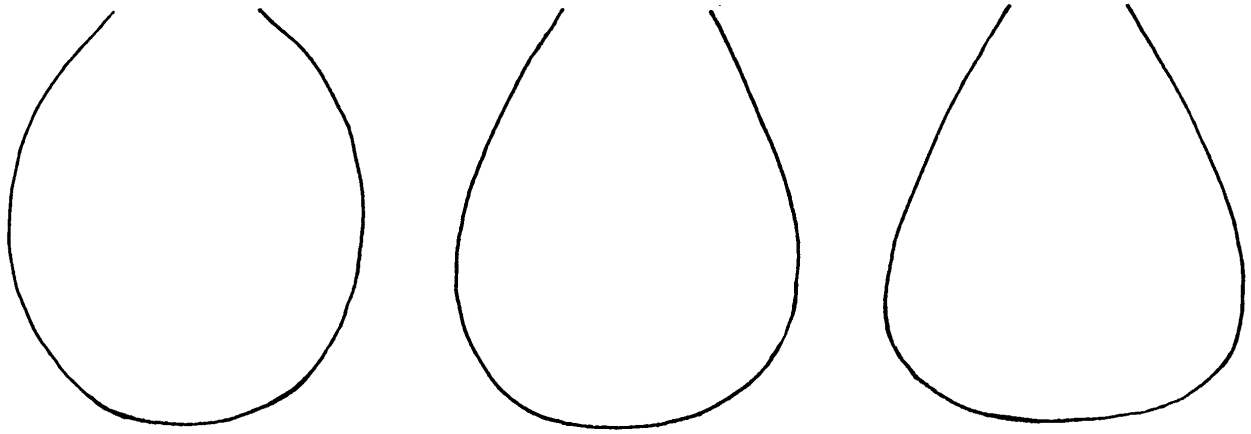
Ad. 31: Fruit: height

The maximum height should be observed, excluding the stalk.

Ad. 32: Fruit: diameter

The maximum diameter should be observed.

Ad. 34: Fruit: position of maximum diameter



1
in middle

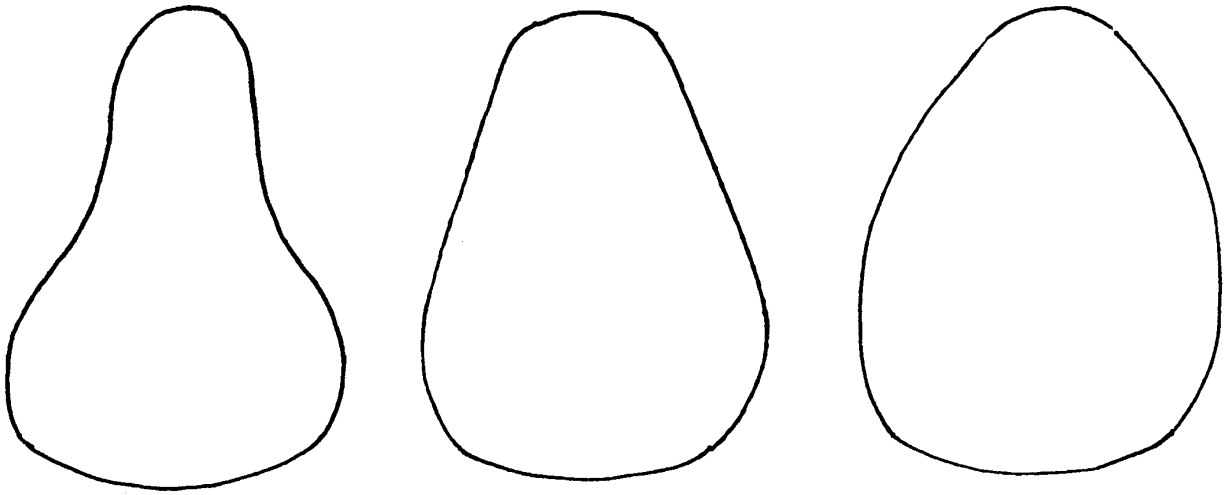
2
slightly towards calyx

3
clearly towards calyx

Ad. 35: Fruit: symmetry in longitudinal section

Observations should be made on fruits in longitudinal section.

Ad. 36: Fruit: profile of sides



1
concave

2
straight

3
convex

Ad. 37: Fruit: ground color

The ground color is the first color to appear chronologically during the development of the fruit.

Ad. 38: Fruit: hue of over color

Observations should be made after removing the bloom.

Ad. 42: Fruit: relative area of russet around stalk attachment

See Ad. 49.

The russet is a dull brown rough finish on the skin.

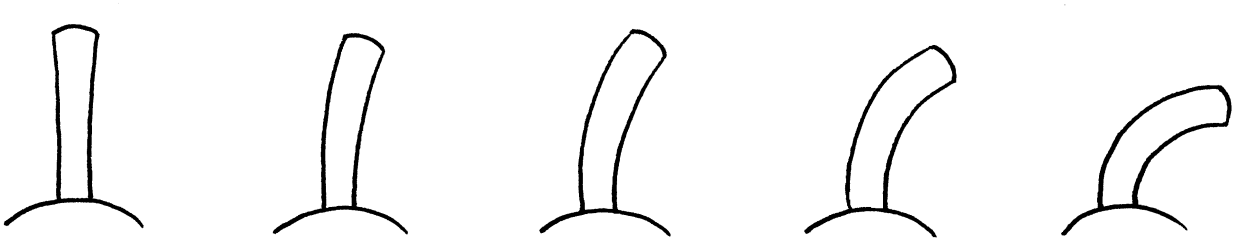
Ad. 43: Fruit: relative area of russet on cheeks

See Ad. 42 and Ad. 49.

Ad. 44: Fruit: relative area of russet around eye basin

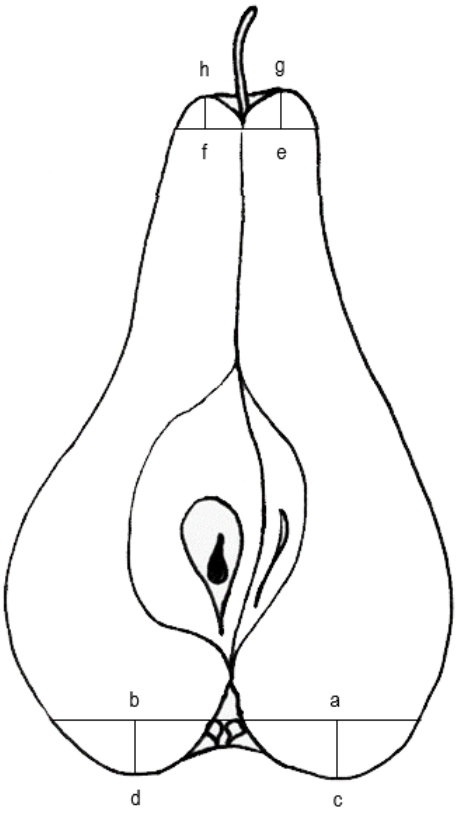
See Ad. 41 and Ad 46.

Ad. 48: Fruit: curvature of stalk



1	2	3	4	5
absent or very weak	weak	medium	strong	very strong

Ad. 49: Fruit: depth of stalk cavity



Fruits should be cut through the central axis as accurately as possible. Stalk cavity and eye basin depth and width should be measured from the sectioned fruits. The following diagram indicates the position of lines scored, using a knife or scalpel, on the fruit prior to measuring these characteristics.
• The lines a-b and e-f must be at right angles to the axis of the fruit. (A plastic protractor can be used to ensure accuracy.)
• The line a-b is marked at the base of the sepals.
• The line e-f is marked at the insertion of the stalk.
• The lines a-c and b-d indicate the eye basin depth. They are drawn at right angles to the line a-b to the point where the basin curve levels out.
• The lines e-g and f-h indicate the stalk cavity depth. They are drawn at right angles to the line e-f to the point where the stalk cavity curve levels out.
• In the case of asymmetric or irregular sections, observations should be made on the larger side (i.e. in case of depths of stalk cavity: e-g instead of f-h; in case of depth of eye basin: a-c instead of b-d).

f-h = depth of stalk cavity (characteristic 45)
a-c = depth of eye basin (characteristic 47)
a-b = width of eye basin (characteristic 48)

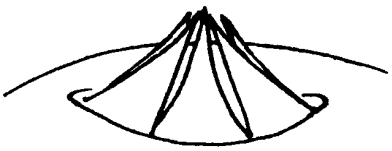
Ad. 50: Fruit: depth of eye basin

See Ad. 49.

Ad. 51: Fruit: width of eye basin

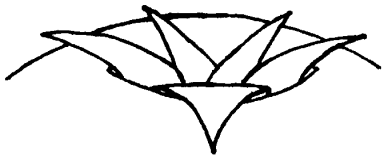
See Ad. 49.

Ad. 53: Fruit: attitude of sepals



1
coverging

2
erect



3
spreading

Ad. 55: Fruit: firmness of flesh

Observations can be made by measuring, using a penetrometer.

Ad. 58: Time of beginning of flowering

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

Ad. 59: Time for harvest

The time for harvest is reached when fruits are ripe for picking and can most easily be picked from the trees. As this physiological stage of the fruit is characterized by a regression of starch content in the flesh, the time for harvest can also be determined by assessing the starch content.

Ad. 60: Time of eating maturity

The time of eating maturity is reached when the fruit is ripe for eating and has reached its optimum flavor and aroma. Eating maturity can be reached on trees or in cold chambers. As this physiological stage of the fruit is characterized by a degradation of starch content in the flesh, the time of eating maturity can also be determined by assessing the starch content.

8.3 Additional Explanations on the Table of Characteristics

BBCH-Scale for the description of the phenological growth stages of pome fruit

Stage	Explanation
Principal growth stage 0: Bud development	
00	Dormancy: leaf buds and the thicker inflorescence buds closed and covered by dark brown scales
01	Beginning of bud swelling (leaf buds); buds visibly swollen, bud scales elongated, with light colored patches
03	End of leaf bud swelling: bud scales light colored with some parts densely covered by hairs
07	Beginning of bud break: first green leaf tips just visible
09	Green leaf tips about 5 mm above bud scales
Principal growth stage 1: Leaf development	
10	Green leaf tips 10 mm above the bud scales; first leaves separating (mouse-ear stage)
11	First leaves unfolded (others still unfolding)
15	More leaves unfolded, not yet at full size
19	First leaves fully expanded
Principal growth stage 2: (not applicable)	
Principal growth stage 3: Shoot development[1)] [1)] From terminal buds	
31	Beginning of shoot growth: axes of developing shoots visible
32	Shoots about 20 % of final length
39	Shoots about 90 % of final length
Principal growth stage 4: (not applicable)	
Principal growth stage 5: Inflorescence emergence	
51	Inflorescence buds swelling: Inflorescence buds swelling: bud scales elongated, with light buds closed, light brown scales colored patches visible
52	End of bud swelling: light colored bud scales visible with parts densely covered by hairs
53	Bud burst: green leaf tips enclosing flowers visible
54	Mouse-ear stage: green leaf tips 10 mm above bud scales; first leaves separating Flower buds visible (still closed)
55	Flower buds visible (still closed)
56	Green bud stage: single flowers separating (still closed)
57	Red bud stage: flower petals elongating; sepals slightly open; petals just visible
59	Most flowers with petals forming a hollow ball
Principal growth stage 6: Flowering	
60	First flowers open
61	Beginning of flowering: about 10 % of flowers open
65	Full flowering: at least 50 % of flowers open, first petals falling
67	Flowers fading: majority of Flowers fading: majority of petals fallen
69	End of flowering: all petals fallen

Principal growth stage 7: Development of fruit	
71	Fruit size up to 10 mm; fruit fall after flowering
72	Fruit size up to 20 mm
73	Second fruit fall
74	Fruit diameter up to 40 mm; fruit erect (T-stage: underside of fruit and stalk forming a T)
75	Fruit about half final size
77	Fruit about 70 % of final size
Principal growth stage 8: Maturity of fruit and seed	
81	Beginning of ripening: lightening of cultivar-specific fruit color
85	Advanced ripening: increase in intensity of cultivar-specific color
87	Fruit ripe for picking
89	Fruit ripe for consumption: fruit have typical taste and firmness
Principal growth stage 9: Senescence, beginning of dormancy	
91	Shoot growth completed; terminal bud developed; foliage still fully green
92	Leaves begin to discolor
93	Beginning of leaf fall
97	All leaves fallen
99	Harvested product

(taken from: Biologische Bundesanstalt für Land- und Forstwirtschaft [1997])

8.4 Synonyms of example varieties

Example Varieties	Synonym(s)
Abbé Fétel	Abate Fétel
Belle Angevine	Schöne Angevine
Bergamotte Esperen	Esperens Bergamotte
Beurré Alexandre Lucas	Alexander Lucas, Mantecosa Alexandre Lucas
Beurré Bosc	Bosc's Flaschenbirne, Kaiser Alexander, Mantecosa Bosc
Beurré Clairgeau	Clairgeaus Butterbirne
Beurré d'Amanlis	Amanlis Butterbirne
Beurré Diel	Diels Butterbirne
Beurré Giffard	Giffards Butterbirne, Mantecosa Giffard, Cañella
Beurré Hardy	Butirra Hardy, Gellerts Butterbirne
Beurré Lebrun	Lebruns Butterbirne
Beurré Six	Six Butterbirne
Beurré Superfin	Conseiller de la Cour, Hochfeine Butterbirne
Citron des Carmes	Sommermagdalene
Clapp's Favourite	Clapps' Liebling
Colorée de Juillet	Bunte Julibirne
Comtesse de Paris	Gräfin von Paris
Conference	Konferenzbirne
Curé	Espadón de Invierno, Pastorenbirne, Vicar of Winkfield
Docteur Jules Guyot	Jules Guyot, Limonera
Doyenné d'Alençon	Alencons Dechantsbirne
Doyenné d'Hiver	Decana d'Inverno, Pastorale, Winterdechantsbirne
Doyenné de Juillet	Doyenné d'Été, Julidechantsbirne
Doyenné du Comice	Decana del Comizio, Decana del Congreso, Vereinsdechantsbirne
Duchesse d'Angoulême	Herzogin von Angoulême
Duchesse Elsa	Herzogin Elsa
Épine du Mas	Colmar, Herbstdorn
Espargne	Sparbirne
Jeanne d'Arc	Jungfrau von Orleans
Joséphine de Malines	Josephine von Mecheln
Liegels Winterbutterbirne	Beurré d'Hiver de Liegel
Louise Bonne d'Avranches	Buona Luisa, Gute Luise, Louise Bonne of Jersey
Mirandino rosso	Bella di Giugno
Monchallard	Belle Epine Fondante, Epine d'Eté de Bordeaux
Nouveau Poiteau	Neue Poiteau
Passe Crassane	Edelcrassane, Passa Crassana
Pitmaston Duchesse d'Angoulême	Pitmaston Duchesse, Williams' Duchesse
Poire de Charneu	Bürgermeisterbirne, Köstliche von Charneu, Légipont
Précoce de Cassano	Frühe von Cassano
Précoce de Trevoux	Frühe von Trevoux
Red Bartlett	Max Red Bartlett, Rote Williams, Williams Roja, Williams Rouge
Santa Maria	Marienbirne
Starkrimson	Red Clapp's Favourite, Rote Clapps Liebling, Super Red
Tongre	Beurré Durandeau, Durondeau, Tongern
Williams' Bon Chrétien	Bartlett, Buen Cristiano Williams, Williams Christbirne

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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 communis* L.	☐
1.1.2	Common name	European Pear, Pear	

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) 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	Jeanne d'Arc	1 [ ]
	upright	Beurré Clairgeau, Doyenné du Comice	2 [ ]
	semi-upright	Colorée de Juillet, Nojabrskaja	3 [ ]
	spreading	Madame Ballet	4 [ ]
	drooping	Beurré Diel, Beurré Six	5 [ ]
	weeping	Armida, Beurré d'Amanlis	6 [ ]
5.2 (9)	**(NEW) Young shoot: intensity of pubescence**		
	absent or very weak		1 [ ]
	weak		2 [ ]
	medium		3 [ ]
	strong		4 [ ]
	very strong		5 [ ]
5.3 (20)	**Petiole: presence of stipules**		
	absent	Monchallard	1 [ ]
	present	Doyenné du Comice	9 [ ]
5.4 (30)	**Fruit: weight**		
	very low	Petit Muscat, Précoce de Cassano	1 [ ]
	very low to low		2 [ ]
	low	Citron des Carmes, Doyenné de Juillet	3 [ ]
	low to medium		4 [ ]
	medium	Docteur Jules Guyot, Épine du Mas	5 [ ]
	medium to high		6 [ ]
	high	Doyenné du Comice, Passe Crassane	7 [ ]
	high to very high		8 [ ]
	very high	Margarete Marillat	9 [ ]
5.5 (34)	**Fruit: position of maximum diameter**		
	in middle	Bergamotte Esperen	1 [ ]
	slightly towards calyx	Beurré Alexandre Lucas, Doyenné du Comice	2 [ ]
	clearly towards calyx	Conference	3 [ ]

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

	Characteristics	Example Varieties	Note
5.6 (36)	**Fruit: profile of sides**		
	concave	Abbé Fétel, Beurré Bosc	1 [ ]
	straight	Beurré Giffard	2 [ ]
	convex	Doyenné d'Hiver, Olivier de Serres	3 [ ]
5.7 (37)	**Fruit: ground color**		
	not visible	Grand Champion, Uta	1 [ ]
	green	Nouveau Poiteau	2 [ ]
	yellow green	Beurré Giffard, Beurré Hardy	3 [ ]
	yellow	Président Drouard, Williams' Bon Chrétien	4 [ ]
5.8 (38)	**Fruit: hue of over color**		
	orange	Précoce de Trévoux	1 [ ]
	orange red	Duchesse Elsa	2 [ ]
	pink red	Belle Angevine	3 [ ]
	light red	Nordhäuser Winterforelle	4 [ ]
	dark red	Starkrimson	5 [ ]
	purple		6 [ ]
5.9 (40)	**Fruit: relative area of over color**		
	absent or very small	Passe Crassane, Président Drouard	1 [ ]
	very small to small		2 [ ]
	small	Précoce de Trévoux	3 [ ]
	small to medium		4 [ ]
	medium	Nordhäuser Winterforelle	5 [ ]
	medium to large		6 [ ]
	large	Beurré Clairgeau	7 [ ]
	large to very large		8 [ ]
	very large	Starkrimson	9 [ ]
5.10 (41)	**Fruit: pattern of over color**		
	only solid flush		1 [ ]
	solid flush with stripes		2 [ ]
	only stripes		3 [ ]
	flushed and mottled		4 [ ]

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

	Characteristics	Example Varieties	Note
5.11 (56)	**Fruit: color of flesh**		
	white		1 [ ]
	greenish		2 [ ]
	yellowish		3 [ ]
	pinkish		4 [ ]
	reddish		5 [ ]
5.12 (58)	**Time of beginning of flowering**		
	very early	Beurré Alexandre Lucas, Pitmaston Duchesse d'Angoulême	1 [ ]
	very early to early		2 [ ]
	early	Delfrap, Louise Bonne d'Avranches	3 [ ]
	early to medium		4 [ ]
	medium	Packham's Triumph, Williams' Bon Chrétien	5 [ ]
	medium to late		6 [ ]
	late	Doyenné du Comice, Jeanne d'Arc	7 [ ]
	late to very late		8 [ ]
	very late	Frangipane	9 [ ]
5.13 (60)	**Time of eating maturity**		
	extremely early		1 [ ]
	extremely early to very early		2 [ ]
	very early	Doyenné de Juillet, Mirandino rosso	3 [ ]
	very early to early		4 [ ]
	early	Précoce de Trévoux	5 [ ]
	early to medium		6 [ ]
	medium	Coscia	7 [ ]
	medium to late		8 [ ]
	late	Beurré Hardy, Doyenné du Comice, Jeanne d'Arc	9 [ ]
	late to very late		10 [ ]
	very late	Doyenné d'Hiver, Nordhäuser Winterforelle, Président Drouard	11 [ ]
	very late to extremely late		12 [ ]
	extremely late		13 [ ]

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			

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.]

- Resistance to pests and diseases

- Virus status

(a) The variety is free from all known virus as follows (indicate from which viruses) [ ]

.....

(b) The plant material is virus tested (indicate against which virus) [ ]

.....

(c) The virus status is unknown [ ]

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]