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UPOV

INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

GENEVA

DRAFT

KIWIFRUIT

UPOV Code: ACTIN

Actinidia Lindl.

GUIDELINES

FOR THE CONDUCT OF TESTS

FOR DISTINCTNESS, UNIFORMITY AND STABILITY

prepared by experts from New Zealand

to be considered by the
Technical Working Party for Fruit Crops
at its fortieth session, to be held in Angers, France, from September 21 to 25, 2009

Alternative Names:*

Botanical name	*English*	*French*	*German*	*Spanish*
Actinidia Lindl	Kiwifruit	.....	.....	.....

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.

* 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 *Actinidia* Lindl. with particular relevance to *A. arguta, A. chinensis, A. deliciosa, A. melanandra, A. kolomikta, A. eriantha, A. rufa,* A. *polygama* and interspecific hybrids of these species.

QZ comment, do we need specific species?

2. Material Required

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

2.2 The material is to be supplied in the form of plants on their own roots or plants on a clonal rootstock. The competent authorities to select the most appropriate rootstock. For female varieties, the competent authorities should ensure that an appropriate male variety is available for adequate pollination.

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

8 plants on their own roots,
8 plants on a clonal rootstock

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

2.5 The plant material should not have undergone any treatment which would affect the expression of the characteristics of the variety, unless the competent authorities allow or request such treatment. If it has been treated, full details of the treatment must be given.

3. Method of Examination

3.1 Number of Growing Cycles

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

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

3.2 Testing Place

Tests are normally conducted at one place. In the case of tests conducted at more than one place, guidance is provided in TGP/9 “Examining Distinctness”.

3.3 Conditions for Conducting the Examination

3.3.1 The tests should be carried out under conditions ensuring satisfactory growth for the expression of the relevant characteristics of the variety and for the conduct of the examination. In particular, it is essential that the plants produce a satisfactory crop of fruit in each of the two growing cycles.

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

MG: single measurement of a group of plants or parts of plants
VG: visual assessment by a single observation of a group of plants or parts of plants

3.4 Test Design

3.4.1 Each test should be designed to result in a total of at least 8 plants.

JP PROPOSAL: 6 PLANTS QZ PROPOSAL 5 PLANTS

3.4.2 The design of the tests should be such that plants or parts of plants may be removed for measurement or counting without prejudice to the observations which must be made up to the end of the growing cycle.

3.5 Number of Plants / Parts of Plants to be Examined

Unless otherwise indicated, all observations should be made on 8 plants or parts taken from each of 8 plants. In the case of parts of plants, the number to be taken from each of the plants should be 2.

JP PROPOSAL: 6 PLANTS QZ PROPOSAL 5 PLANTS

3.6 Additional Tests

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

4. Assessment of Distinctness, Uniformity and Stability

4.1 Distinctness

4.1.1 General Recommendations

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

4.1.2 Consistent Differences

The 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.

4.2 Uniformity

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

4.2.2 For the assessment of uniformity, a population standard of 1% and an acceptance probability of at least 95% should be applied. In the case of a sample size of 8 plants, 1 off-type is allowed.

JP PROPOSAL: 6 PLANTS QZ PROPOSAL 5 PLANTS, NO OFFTYPES

4.3 Stability

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

4.3.2 Where appropriate, or in cases of doubt, stability may be tested, either by growing a further generation, or by testing a new plant stock to ensure that it exhibits the same characteristics as those shown by the previous material supplied.

5. Grouping of Varieties and Organization of the Growing Trial

5.1 The selection of varieties of common knowledge to be grown in the trial with the candidate varieties and the way in which these varieties are divided into groups to facilitate the assessment of distinctness are aided by the use of grouping characteristics.

5.2 Grouping characteristics are those in which the documented states of expression, even where produced at different locations, can be used, either individually or in combination with other such characteristics: (a) to select varieties of common knowledge that can be excluded from the growing trial used for examination of distinctness; and (b) to organize the growing trial so that similar varieties are grouped together.

The following have been agreed as useful grouping characteristics:

For male varieties

(a) Plant: ploidy (characteristic 3)
(b) Time of beginning of flowering (characteristic 95)

For female and hermaphrodite varieties

(a) Plant: ploidy (characteristic 3)
(b) Fruit: size (characteristic 64)
(c) Fruit: shape (characteristic 65)
(d) Fruit: hairiness of skin (characteristic 77)
(e) Fruit: main color of outer pericarp (characteristic 85)
(f) Fruit: main color of inner pericarp (locules) (characteristic 86)
(g) Time of maturity for harvest (characteristic 96)

5.4 Guidance for the use of grouping characteristics, in the process of examining distinctness, is provided through the General Introduction.

6. Introduction to the Table of Characteristics

6.1 Categories of Characteristics

6.1.1 Standard Test Guidelines Characteristics

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

6.1.2 Asterisked Characteristics

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

6.2 States of Expression and Corresponding Notes

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

6.3 Types of Expression

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

6.4 Example Varieties

Where appropriate, example varieties are provided to clarify the states of expression of each characteristic.
Example varieties are separated into two groups:
A Fruiting and male varieties belonging to *A. deliciosa, A. chinensis, A. kolomikta, A. eriantha, A. rufa*

B Fruiting and male *v*arieties belonging to *A. arguta, A. polygama, A. melanandra, A. macrosperma*

6.5 Legend

(*) Asterisked characteristic – see Chapter 6.1.2

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

MG, VG: see Chapter 3.3.2

(1) The characteristic only applies to varieties in Group A
(2) The characteristic only applies to varieties in Group B

See Chapter 6.4 and explanations on the Table of Characteristics in 8.1

(a)-(h) See Explanations on the Table of Characteristics in Chapter 8.1
(+) See Explanations on the Table of Characteristics in Chapter 8.2

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

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
1. (*)	**VG**	**Plant: sex**					
QL		female				Hayward (A), Shinzan (B)	1
		male				Matua (A), a-Awaji (B)	2
		partially hermaphrodite					3
		fully hermaphrodite				Jenny (A)	4
2.	**VG**	**Plant: self fruit setting (hermaphrodite varieties only)**					
QL		absent					1
		present					9
3. (*) (+)	**MG**	**Plant: ploidy**					
QL		diploid				Hort16A (A), Kosui (B)	1
		tetraploid				Hortgem Tahi (B), Kaimutu (A)	2
		pentaploid				Shinzan (B)	3
		hexaploid				Hayward (A), Mitukou (B)	4
		octoploid					5
4.	**VG**	**Plant: vigor**					
QN		weak					3
		medium				Hayward (A)	5
		strong				Bruce (A)	7
		very strong				Matua (A)	9

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
5. (*)	**VG**	**Young shoot: hairiness**					
QN	**(a)**	absent					1
		present				King (A)	9
		JP propose to delete Characteristic 5 and combine with characteristic 6				1 absent or very sparse	
6. (*)	**VG**	**Young shoot: density of hair**					
QN	**(a)**	sparse				a-Awaji (B), Kaimitu (A)	3
		medium				Hayward (A), Sinzan (B)	5
		dense				King (A), Mitukou (B)	7
7. (+)	**VG**	**Young shoot: type of hairiness**					
QL	**(a)**	downy					1
		velutinous	JP propose to delete				2
		tomentose				Hortgem Tahi (B)	3
		hirsute					4
		bristly					5
		hispid					6
8. (*)	**VG**	**Young shoot: anthocyanin coloration of growing tip**					
QN	**(a)**	absent or very weak				Hort16A (A), Mitukou (B)	1
	(e)	weak				King (A), Sinzn (B)	3
		medium				Kosui (B), Tomua (A)	5
		strong				Houkou (B), Konyoku (A)	7

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
9.		**Stem: thickness**	Propose to DELETE				
		thin					3
		medium				Hayward	5
		thick				Bruno	7
10. (*)	**VG**	**Stem: color of shoot on sunny side**					
PQ	**(b)**	grey white					1
		green white					2
		grey brown				King (A), Mitukou (B)	3
		yellow brown				Sparkler (A)	4
		light brown				a-Hirano (B), Hort16A (A)	5
		red brown				Ranger (A)	6
		purple brown				Bruno (A)	7
		dark brown				Kosui (B)	8
11.	**VG**	**Stem: roughness of bark**					
QN	**(b)**	smooth				Sinzan (B), Sparkler (A)	3
		medium				a-Gassan (B), Meteor (A)	5
		rough				a-Awaji (B), Hayward (A)	7
12.	**VG**	**Stem: hairiness**					
QN	**(b)**	absent				Hortgem Tahi (B)	1
		present				Hayward (A)	9
		JP propose to delete Characteristic 12 and combine with characteristic 13				1 absent or very sparse	

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
13.	**VG (1)**	**Stem: density of hair**					
QN	**(b)**	sparse				Meteor (A)	3
		medium	QZ propose to delete			Hayward (A)	5
		dense					7
14. **(+)**	**(1)**	**Stem: type of hairiness**					
		downy				Kaimai (A)	1
		velutinous	QZ + JP propose to delete				2
		tomentose				Bruce (A)	3
		hirsute					4
		bristly				Hayward (A)	5
		hispid					6
15. **(*)**	**VG**	**Stem: size of lenticels**					
QN	**(b)**	very small				Kaimai (A)	1
		small				Monty (A), Sinzan (B)	3
		medium				Hayward (A), r-Gassan (B)	5
		large				Hort16A (A)	7
16. **(*)**	**VG**	**Stem: number of lenticels**					
QN	**(b)**	few				Meteor (A), Sigemidori (B)	3
		medium				Hayward (A), Sinzan (B)	5
		many				Bruno (A), Mitukou (B)	7

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
17. (*)	**VG**	**Stem: color of lenticels**					
PQ	**(b)**	whitish				Gracie (A)	1
		yellowish				Bruno (A)	2
		brownish	JP propose to delete			Hort16A (A)	3
18. (+)		**Stem: proximal face of bud support**	DELETE				
		perpendicular				Sparkler	1
		sloping				Bruno	9
19. (*) (+)	**VG**	**Stem: size of bud support**					
QN	**(b)**	small				Sparkler (A)	3
		small to medium				Hayward (A)	4
		medium				a-Awaji (B), King (A)	5
		medium to large				Sinzan (B), Kaimai (A)	6
		large				Kaimitu	7
20.		**Stem: profile of proximal face of bud support (if sloping)**	DELETE				
		convex				Hayward	1
		straight				Bruno	2
		concave				Matua	3
21. (*) (+)	**VG**	**Stem: presence of bud cover**					
QL	**(b)**	absent				Hort16A (A), Kousui (B)	1
		present				Hayward (A), Mitukou (B)	9

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
22. (*) (+)	**VG**	**Stem: size of hole in bud cover**					
QN	**(b)**	small				Abbott (A), Mitukou (B)	3
		medium				Hayward (A), r-Awaji (B)	5
		large				Elmwood (A), r-Nagano (B)	7
23.	**VG**	**Stem: leaf scar**					
(+)							
QN	**(b)**	flat				Meteor (A), Sinzan (B)	1
		shallow				Hort16A (A), r-Nagano (B)	2
		deep				Kousui (B), Monty (A)	3
24.	**VG (2)**	**Stem: presence of pith**					
		absent	QZ +ZA propose to delete				1
		present					9
	JP propose to delete Characteristic 24 and combine with characteristic 25					1 absent 2 solid 3 lammelate	
25.	**VG (2)**	**Stem: type of pith**					
QL		solid	QZ+ZA propose to delete				1
		lamellate				Hayward (A)	2
		hollow					3

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
26. (*) (+)	**VG**	**Leaf blade: shape**					
PQ	**(c)**	lanceolate				Kaimai (A)	1
	(d)	medium ovate					2
		broad ovate				Hayward (A)	3
		very broad ovate				Meteor (A)	4
		broad obovate				Bruno (A)	5
		very broad obovate				Matua (A)	6
		JP PROPOSAL reform character 26 1 ovate 2 elliptic 3 obovate New character Leaf blade: ratio length/width 3 small 5 medium 7 large					
27. (*) (+)	**VG**	**Leaf blade: shape of apex**					
PQ	**(c)**	caudate				Hortgem Tahi (B)	1
	(d)	acuminate				Kaimai (A), Yukimusume (B)	2
		acute				Hayward (A)	3
		rounded				Ryokuou (B)	4
		emarginate				Kaimitu (A)	5
		retuse				Sinzan (B)	6
28. (+)	**VG (1)**	**Leaf blade: arrangement of basal lobes**					
QN	**(c)**	far apart				Kaimai (A)	1
	(d)	slightly apart				Matua (A)	2
		touching each other				Hort16A (A)	3
		slightly overlapping				Hayward (A)	4
		strongly overlapping					5

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
29.	**VG (1)**	**Leaf blade: hair on <u>upper</u> side**					
QN	**(c)**	absent or very sparse				Hort16A (A)	1
	(d)	sparse				Kaimai (A)	3
		medium				Bruno (A)	5
		dense				Meteor (A)	7
30.	**VG**	**Leaf blade: hair on <u>lower</u> side**					
QN	**(c)**	absent or very sparse				Hortgem Tahi (B), Kousui (B)	1
	(d)	sparse				a-Gassan (B), Kaimitu (A)	3
		medium				a-Syowa (B), Hayward (A)	5
		dense				Ranger (A), Shinzan (B)	7
31.	**VG**	**Leaf blade: puckering/blistering on upper side**					
QN	**(c)**	absent or very weak				Kaimai (A)	1
	(d)	weak				Hort16A (A), Satoizumi (B)	3
		medium				Hayward (A), Mitukou (B)	5
		strong	QZ propose to delete			Sinzan (B)	7
32. (*)	**VG**	**Leaf blade: green color of upper side**					
QN	**(c)**	light				a- Gassan (B)	3
	(d)	medium				Hayward (A), Satoizumi (B)	5
		dark				Bruno (A), Sinzan (B)	7

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
33. (*)	**VG**	**Leaf blade: color of lower side**					
PQ	**(c)**	whitish				Sinzan (B)	1
	(d)	light green				a-Awaji (B), Hortgem Tahi (B)	2
		medium green				Bruno (A)	3
		yellow green				Hayward (A)	4
		yellow brown					5
34.	**VG**	**Leaf blade: variegation**					
QL	**(c)**	absent					1
	(d)	present	QZ do we need?				9
35.	**VG**	**Leaf blade: color of variegation**					
PQ	**(c)**	white and green only					1
	(d)	white, green and red					2
JP proposal Leaf blade: antocyanin coloration“ and to read each status „ abent (1) present (9)“. Because white (=variegation), red (=anthocyanin), green (=chlorophile) are confusing in char 34 and 35.							
36.		**Leaf blade: spines along main vein on lower side**	DELETE				
		absent					1
		present					9
37.	**VG/ MG**	**Leaf: ratio petiole length/blade length**					
QN	**(c)**	very small				Kaimai (A)	1
	(d)	small				Gracie (A)	3
		medium	QZ to delete			Meteor (A), Kosui (B)	5
		large				Hayward (A), Satoizumi (B)	7

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
38.		**Petiole: density of hair**	DELETE				
		absent or very sparse					1
		sparse				Kaimai	3
		medium				Meteor	5
		dense				Bruno	7
		very dense				Tomua	9
39.	**VG**	**Petiole: anthocyanin coloratiom of upper side**					
QN	**(c)**	absent or very weak				Kaimai (A), Mitukou (B)	1
	(d)	weak				Sparkler (A), Houkou (B)	3
	(e)	medium				Hayward (A), Sinzan (B)	5
		strong				Tomua (A), a-Hirano (B)	7
40.	**VG (1)**	**Flower bud: anthocyanin coloration of protruding petal ends (at calyx split)**					
QN		absent or very weak				Hort16A (A), Mitukou (B)	1
		weak				Houkou (B)	3
		medium				Hayward (A), Satoizumi (B)	5
		strong	QZ propose to delete			Meteor (A) a-Hirano (B)	7

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
41.	**MG**	**Inflorescence: predominant number of flowers**					
QN		very few				Hayward (A)	1
		few				Matua (A)	2
		medium				Tomua (A)	3
		many					4
42. (*) (+)	**VG/ MG**	**Flower stalk: length**					
QN	**(f)**	short				a-Hirano (B), Matua (A)	3
		medium				Hort16A (A), Sinzan (B)	5
		long				Mitukou (B), Tomua (A)	7
		very long				Jade Moon (A)	9
43.		**Flower stalk: density of hairs** DELETE					
	(f)	absent or very sparse					1
		sparse					2
		dense					3
44.		**Flower stalk: length of hair** DELETE					
		short				Hort16A	3
		medium				Hayward	5
		long				Tomua	7

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
45.	**VG/ MG**	**Sepal: number**					
QN	**(f)**	few					1
New position		medium				Hortgem Tahi (B)	2
		many				Bruce (A)	3
46. (*)	**VG**	**Sepal: main color**					
PQ	**(f)**	white				Yukimusume (B)	1
		green				Hort16A (A), Mitukou (B)	2
		brown				Tomua (A), Sinzan (B)	3
		reddish brown				a-Awaji (B), Hortgem Tahi (B)	4
47.	**VG**	**Sepal: density of hairs**					
QN	**(f)**	absent or sparse					1
	(1)	medium					2
		dense				Bruce (A)	3
48.		**Sepal: length of hair** DELETE					
		short					3
		medium					5
		long					7
49. (*)	**VG/ MG**	**Flower: diameter**					
QN	**(f)**	small				a-Gassan (B), Sparkler (A)	3
		medium				Matua (A), Satoizumi (B)	5
		large				Sinzan (B)	7
		very large				Hayward (A)	9

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
50. (*) (+)	**VG**	**Flower: arrangement of petals (viewed from beneath)**	NEW CHAR.				
QN	**(f)**	free				Abbott (A), a-Showa (B)	1
		touching				Matua (A), Satoizumi (B)	2
		overlapping				Hayward (A), Sinzan (B)	3
51. (ZA)	**VG**	**Flower: shape in profile**					
PQ	**(f)**	concave					1
		flat					2
		convex					3
52.	**VG**	**Petal: curvature of apex**					
QN	**(f)**	absent or weak					1
		medium				Bruno (A), Kosui (B)	2
		strong				Hayward (A)	3
53. (*) (+)	**VG**	**Petal: type of coloration (adaxial side)**					
QL	**(f)**	single-colored					1
		bicolored				Meteor (A)	2

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
54. (*)	**VG**	**Petal: main or only color on adaxial side**					
PQ		white				Hayward (A), Sinzan (B)	1
		greenish white				Hortgem Tahi (B), Satoizumi (B)	2
		yellowish white				Bruce (A), Mitukou (B)	3
		yellowish green					4
		yellow					5
		orange					6
		light pink					7
		red pink					8
		red					9
55. (*)		**Single-colored varieties only: Petal: different shades of color**	**DELETE**				
		absent					1
		present					9
56. (*)	**VG**	**Single-colored varieties only: Petal: distribution of color intensity**					
PQ	**(f)**	lighter towards base					1
		even					2
		lighter towards apex					3

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
57. **(+)**	**VG**	**<u>Bi-colored varieties only</u>: Petal: second color**					
PQ	**(f)**	white					1
		green				Hayward (A)	2
		orange					3
		light pink					4
		dark pink				Meteor (A)	5
58. **(+)**	**VG**	**<u>Bi-colored varieties only</u>: Petal: distribution of second color**					
PQ	**(f)**	marginal					1
		spotted				Meteor (A)	2
		basal zone	QZ propose to delete			Hayward (A)	3
59.	**VG**	**Filament: color**					
PQ	**(f)**	white				Ranger (A)	1
		light green				Matua (A)	2
		light pink					3
		dark pink	QZ propose to delete				4
60.	**VG (2)**	**Anther: color**					
PQ	**(f)**	yellow				r-Nagano (B)	1
		yellow orange					2
		grey	JP proposal				3
		dark purple				Mituskou (B)	4
		black				a-Syouwa (B)	5

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
61.	**VG**	**Styles: number**					
QN	**(f)**	few				Yamagatamusume (B)	3
		medium				Hort16A (A) (QZ?) Satoizumi (B)	5
		many				Hayward (A), Sinzan (B)	7
62.		**Styles: color**	DELETE				
		white					1
		whitish yellow				Hayward	2
		light green					3
63. (*)	**VG**	**Styles: attitude**					
PQ	**(f)**	erect					1
		semi-erect				Hort16A (A) (QZ?), Houkou (B)	2
		horizontal				Bruno (A), Siazan (B)	3
		both erect and horizontal				Hayward (A)	4
64. (*)	**VG**	**Fruit: size**					
QN	**(g)**	small				Hortgem Tahi (B), a-Gassan (B)	3
		medium				Tomua (A), Mitukou (B)	5
		large				Hayward (A), Sinzan (B)	7
		very large				Jade Moon (A), Kousui (B)	9

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
65. (*) (+)	**VG**	**Fruit: shape**					
PQ	**(g)**	ellipsoid				Hayward (A), Mitukou (B)	1
		cylindric				Bruno (A)	2
		ovoid				Hort16A (A), Yamagataotome (B)	3
		obovoid				Monty (A)	4
		spheroid					5
		obloid				Kuimi (A), Sinzan (B)	6
66.	**VG**	**Fruit: ratio length/width**	NEW CHAR. (JP)				
QN	**(g)**	small					3
		medium					5
		large					7
67. (*) (+)	**VG**	**Fruit: shape in cross section (at median)**					
PQ	**(g)**	circular				Bruno (A), Mitukou (B)	1
		oblate				Hortgem Tahi (B) Kousui (B)	2
		transverse elliptic				Hayward (A)	3

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
68. (*) (+)	**VG**	**Fruit: shape of stylar end**					
PQ	**(g)**	strongly depressed					1
		weakly depressed				Jade Moon (A)	2
		flat				Hayward (A), Satoizumi (B)	3
		rounded				Kousui (B), Tomua (A)	4
		weakly blunt protruding				Skelton (A)	5
		strongly blunt protruding				Hort16A (A)	6
		weakly pointed protruding				Hortgem Toru (B)	7
		strongly pointed protruding					8
			JP propose to delete 7 and 8 in 68 and replace with				
69.	**VG (2)**	**Fruit: degree of pointed protusion on stylar end**	NEW CHAR. (JP)				
QN	**(g)**	weak					1
		medium					2
		strong					3
70. (+)	**VG (1)**	**Fruit: presence of calyx ring**					
QN	**(g)**	absent or weak				Bruno (A)	1
		medium				Hayward (A)	2
		strong				Hort16A (A), Oinmei (A)	3

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
71. (*) (+)	**VG**	**Fruit: shape of shoulder at stalk end**					
PQ	**(g)**	squared				Hortgem Tahi (B), Mitukou (B)	1
		rounded				Hayward (A), Kousui (B)	2
		sloping				Skelton (A)	3
72.	**VG/ MG**	**Fruit: length of stalk**					
QN	**(g)**	short				Hortgem Tahi (B), Houmitu (A)	3
		medium				Sanukigold (A), Sinzan (B)	5
		long				Hayward (A)	7
73.	**MG**	**Fruit: ratio stalk length/fruit length**					
QN	**(g)**	very small				Wuzhi (B)	1
		small				Bruno (A), Kousui (B)	3
		medium				Allison (A), Sinzan (B)	5
		large	QZ propose to delete			Hayward (A)	7
		very large				Jade Moon (A)	9
74.	**VG (1)**	**Fruit: persistence of sepals**					
QL	**(g)**	absent					1
		present					9
75.	**VG**	**Fruit: conspicuousness of lenticels on skin**					
QN	**(g)**	very weak to weak				Hort16A (A), Mitukou (B)	1
		medium				Hayward (A)	2
		strong to very strong	QZ propose to delete			Kosui (B), Topstar antini (A)	3

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
76. (*)	**VG**	**Fruit: color of skin**					
PQ	**(g)**	light green				Hortgem Rua (B)	1
		medium green				Hortgem Tahi (B)	2
		reddish green					3
		greenish brown				Hayward (A)	4
		yellow brown				Hort16A (A)	5
		reddish brown					6
		medium brown				Topstar Vantini (A)	7
		dark brown					8
		JP propose to delete 76 as this overlapps 83					
77. (*)	**VG (1)**	**Fruit: hairiness of skin**					
QL	**(g)**	absent				Hortgem Tahi (B)	1
		present				Hayward (A)	9
78. (*)	**VG (1)**	**Fruit: density of hair**					
QN	**(g)**	very sparse				Topstar Vantini (A)	1
		sparse					3
		medium				Hayward (A)	5
		dense				Bruno (A)	7
		JP propose to combine 77 and 78 new state 1 absent or very sparse					

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
79. (*) (+)	**VG (1)**	**Fruit: type of hairiness**					
QL	**(g)**	downy				Hort16A (A)	1
		velutinous					2
		tomentose					3
		hirsute				Hayward (A)	4
		bristly				Bruno (A)	5
		hispid					6
80. (*)	**VG (1)**	**Fruit: distribution of hairs**					
QN	**(g)**	evenly spread				Hayward (A)	1
		mainly at stylar end				Topstar Vantini (A)	2
81.	**VG (1)**	**Fruit: color of hairs**					
PQ	**(g)**	white					1
		yellow					2
		yellow brown				Hort16A (A)	3
		reddish brown					4
		medium brown				Hayward A)	5
		dark brown				Bruno (A)	6
82. (*)	**VG (1)**	**Fruit: adherence of hairs to skin (when rubbed)**					
QN	**(g)**	very weak to weak				Hort16A (A)	1
		medium				Abott (A)	2
		strong to very strong				Hayward (A)	3

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
83. (*)	**VG**	**Fruit: color of skin at eating maturity**					
PQ		light green					1
		medium green				Hortgem Tahi (B), Mitukou (B)	2
		reddish green					3
		yellow					4
		orange yellow					5
		orange					6
		greenish brown				Hayward (A), Sinzan (B)	7
		reddish brown					8
		light brown				Hort16A (A)	9
		medium brown				Sanuki Gold (A)	10
		dark brown				Kousui (B), Tomua (A)	11
		purple red					12
84.	**VG (2)**	**Fruit: adherence of skin to flesh at eating maturity**					
QN		weak					3
		medium				Hortgem Tahi (B)	5
		strong	QZ propose to delete			Hortgem Toru (B)	7

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
85. (*) (+)	**VG**	**Fruit: main color of outer pericarp**					
PQ	**(h)**	light green				Sinzan (B)	1
		medium green				Hayward (A)	2
		dark green				Hortgem Toru (A)	3
		greenish yellow				Satoizumi (B)	4
		medium yellow				Hort16A (A), Kousui (B)	5
		dark yellow					6
		yellowish orange					7
		orange					8
		red					9
		red purple					10
86. (*) (+)	**VG**	**Fruit: main color of inner pericarp (locules)**					
PQ	**(h)**	light green				Sinzan (B)	1
		medium green				Hayward (A)	2
		dark green				Hortgem Toru (B)	3
		greenish yellow				Satoizumi (B)	4
		medium yellow				Hort16A (A), Kousui (B)	5
		dark yellow					6
		yellowish orange					7
		orange					8
		red				Hortgem Rua (B) (JP?)	9
		red purple					10

JP propose to change 86 to Fruit: base color of locules

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
87. (NZ) (+)	**VG**	**<u>Only varieties with reddish color in inner pericarp</u>: Fruit: amount of color in locules**					
QN	**(h)**	very weak to weak					1
		medium					2
		strong to very strong				Red Princess (A)	3
88. (*) (+)	**VG/ MG**	**Fruit: diameter of core relative to fruit**					
QN	**(h)**	small				Hort16A (A)	3
		small to medium					4
		medium				Bruno (A)	5
		medium to large				Tomua (A)	6
		large				Hayward (A)	7
89. (*) (+)	**VG**	**Fruit: shape of core in cross section**					
PQ	**(h)**	circular				Yukimusume (B)	1
		oblate				Hortgem Tahi (B), Sinzan (B)	2
		transverse elliptic				Hort16A (A), Mitukou (B)	3
90.	**VG**	**Fruit: fluting of core (in cross section)**					
QL	**(h)**	absent				Hortgem Tahi (B)	1
		present	JP propose to delete			Hayward (A)	9

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
91. (*)	**VG**	**Fruit: color of core**					
PQ	**(h)**	white					1
		greenish white				Hayward (A)	2
		yellow white				Hort16A (A), Shinzan (B)	3
		orange					4
		red purple					5
92.	**MG**	**Fruit: sweetness**					
(+)							
QN	**(h)**	very low				Jade Moon (A)	1
		low				Hayward (A), Satoizumi (B)	3
		medium				Tomua (A), Yukimusume (B)	5
		high				Hort16A (A), Kousui (B)	7
93.	**MG**	**Fruit: acidity**					
(+)							
QN	**(h)**	low				Sanuki gold (A) Satoizumi (B)	3
		medium				Hayward (A), Yamagatamusume (B)	5
		high				a-Gassan (B), Bruno (A),	7
94. (*)	**MG**	**Time of vegetative bud burst**					
QN		early				Tomua (A), Yukimusume (B)	3
		medium				Hayward (A), Sinzan (B)	5
		late				Mitukou (B)	7

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
95. (*)	**MG**	**Time of beginning of flowering**					
QN		early				Hort16A (A), Yukimusume (B)	3
		medium				Abbott (A), Kousui (B)	5
		late				Hayward (A)	7
96. (*)	**MG**	**Time of maturity for harvest**					
QN		early				Hortgem Tahi (B), Yamagatamusume (B)	3
		medium				Kousui (B), Tomua (A)	5
		late				Hayward (A), Yukimusume (B)	7

8. Explanations on the Table of Characteristics

8.1 Explanations covering several characteristics

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

1) Applies to Example variety Group A type varieties only

2) Applies to Example variety Group B type varieties only

(a) Unless otherwise stated, all observations on the young shoot should be made during active vegetative growth, on internodes 10 to 20 cm from the tip of growing shoots

(b) All observations on the stem (including observations on the over-wintering buds and bud support) should be made in the middle third of the replacement stem after leaf fall.

(c) The shape, size and hairiness of leaves can vary greatly according to the type and vigor of the shoot on which they are borne. Unless specified, the shoots should be replacement canes, i.e., those that will be tied down and retained for the following season's flowering.

(d) All observations on the leaf should be made near the middle of the current season's growth on sufficiently mature, but not old leaves. The most basal leaves of a shoot should be excluded since they do not usually attain full size or typical shape.

(e) All observations on the presence or absence of anthocyanin coloration in vegetative organs refer to the general appearance of the organ, irrespective of whether red pigments are present in hairs or in the underlying skin.

(f) All observations on the flower should be made on recently fully-opened terminal (king) flowers.

(g) Unless otherwise stated, all observations on the fruit should be made on fruits at harvest maturity.

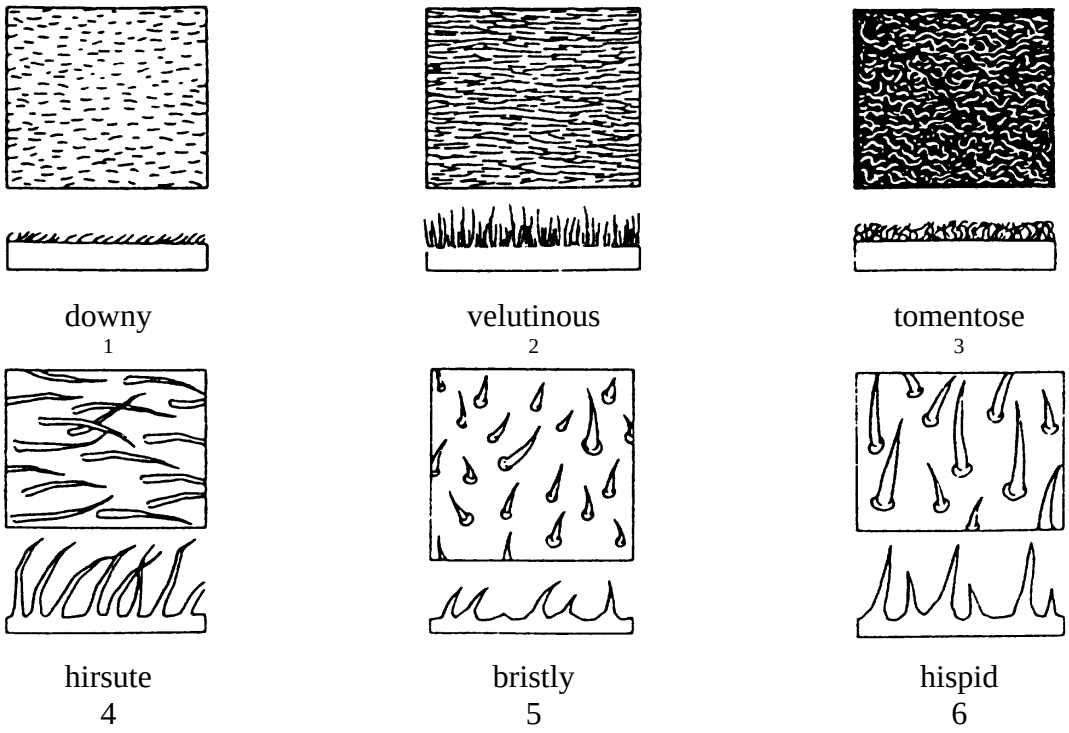
(h) Internal fruit characteristics should be observed when ripe for eating.

8.2 Explanations for individual characteristics

Ad. 3: Plant: ploidy

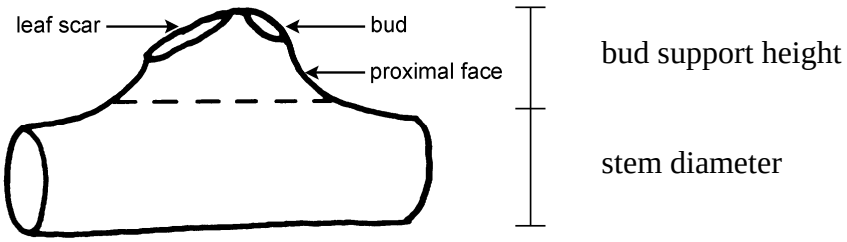
Ploidy is determined by counting chromosomes or by flow cytometry. The basic chromosome number *n* = 29.

Ad. 7: Young shoot: type of hairiness
Ad. 14: Stem: type of hairiness
Ad. 79: Fruit: type of hairiness



Based on drawings in The New Royal Horticultural Society Dictionary of Gardening, 1992, Macmillan Press Ltd., London

Ad. 18: Stem: proximal face of bud support
Ad. 19: Stem: size of bud support
Ad. 23: Stem: leaf scar



Ad. 21: Stem: presence of bud cover
Ad. 22: Stem: size of hole in bud cover

bud cover absent

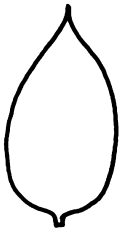
bud cover present
small hole
3

bud cover present
medium hole
5

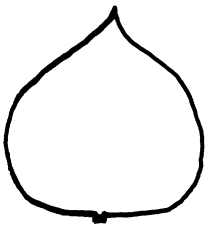
bud cover present
large hole
7

Ad. 26: Leaf blade: shape

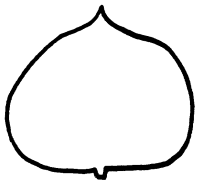
lanceolate
1



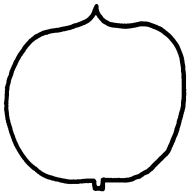
medium ovate
2



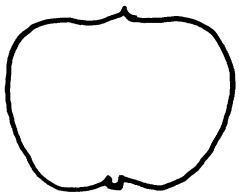
broad ovate
3



very broad ovate
4



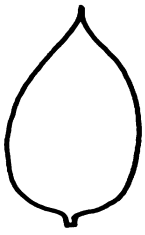
broad obovate
5



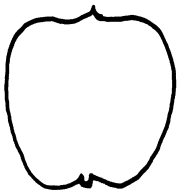
very broad obovate
6

JP proposal new AD 26 and Ad26A

1
lanceolate



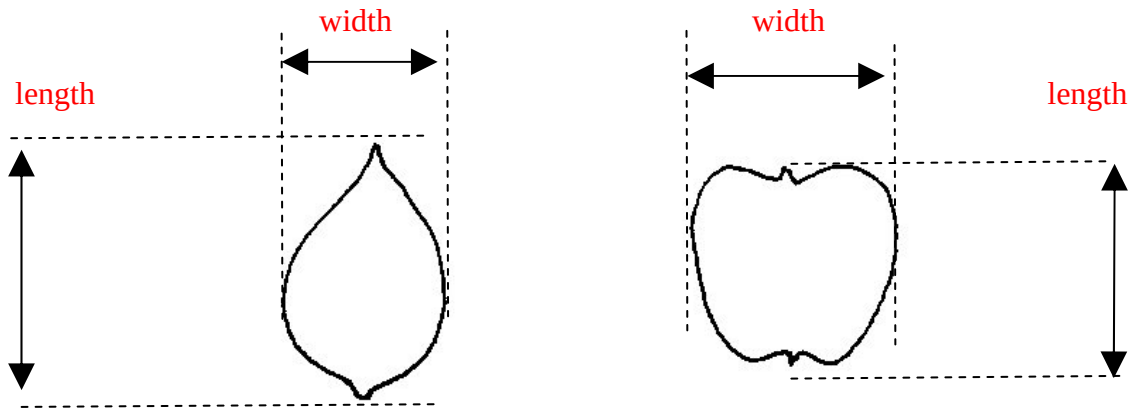
2
ovate



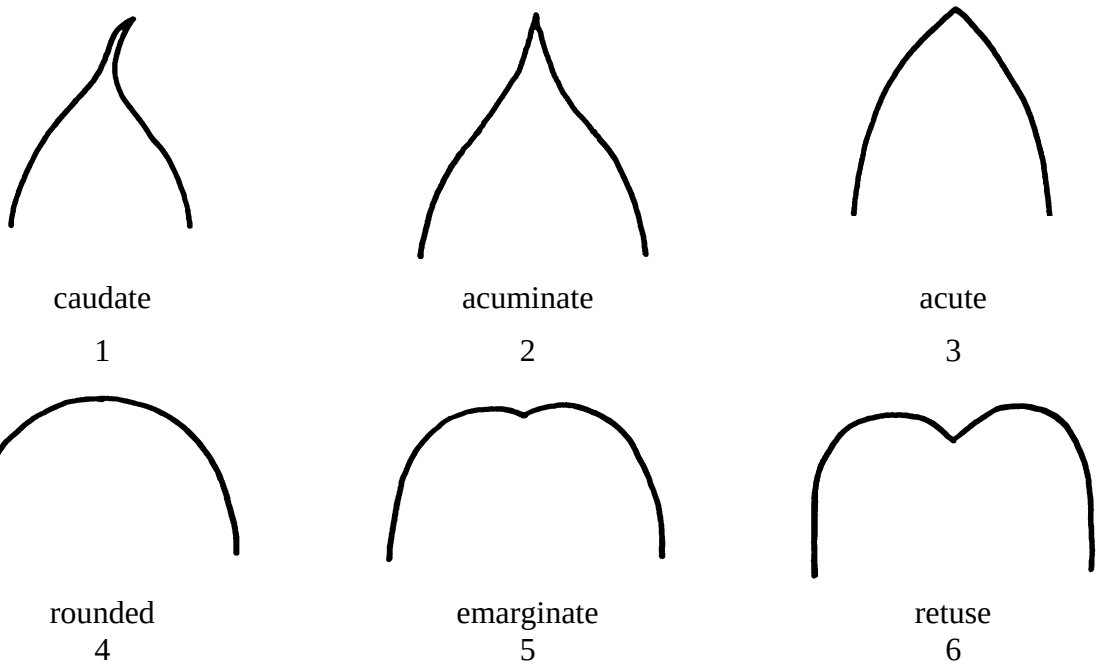
3
obovate

Propose to add

Ad. New: Leaf blade: ratio of length/width



Ad. 27: Leaf blade: shape of apex



caudate
1

acuminate
2

acute
3

rounded
4

emarginate
5

retuse
6

JP Proposal new

Ad. 27**:** Leaf blade: shape of apex

Group A

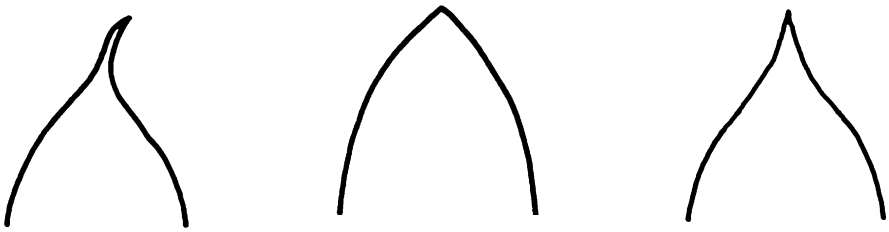
1
depressed

2
round

3
emarginate with acute

4
acute

Group B

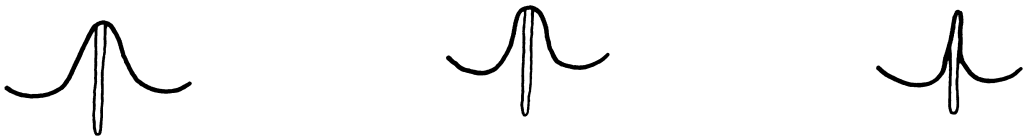


1
caudate

2
acute

3
acuminate

Ad. 28: Leaf blade: arrangement of basal lobes



far apart
1

slightly apart
2

touching each other
3

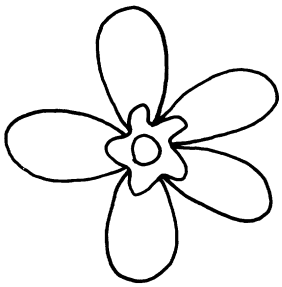
slightly overlapping
4

strongly overlapping
5

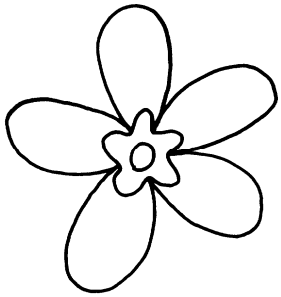
Ad. 42: Flower stalk: length

For a solitary flower, the length of the flower stalk is the length of the pedicel. For an inflorescence, the length of the flower stalk is the length of the peduncle plus the length of the longest pedicel.

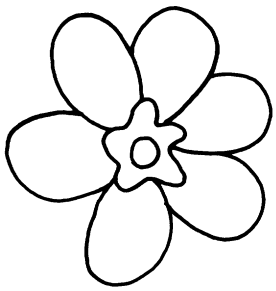
Ad. 50: Flower: arrangement of petals (viewed from beneath)



free
1



touching
2

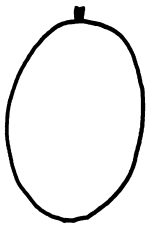


overlapping
3

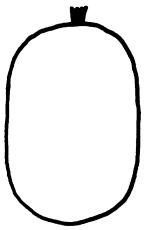
Ad. 53: Petal: type of coloration (adaxial side)
Ad. 57: Bicolored varieties only: Petal: second color
Ad. 58: Bicolored varieties only: Petal: distribution of second color

Bicoloration refers to the absence or presence of a second color on the petal and excludes the petal basal spot, if present.

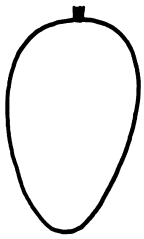
Ad. 65: Fruit: shape



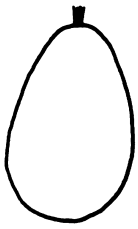
ellipsoid
1



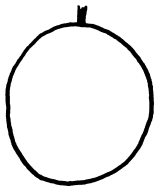
cylindric
2



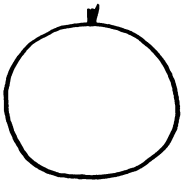
ovoid
3



obovoid
4



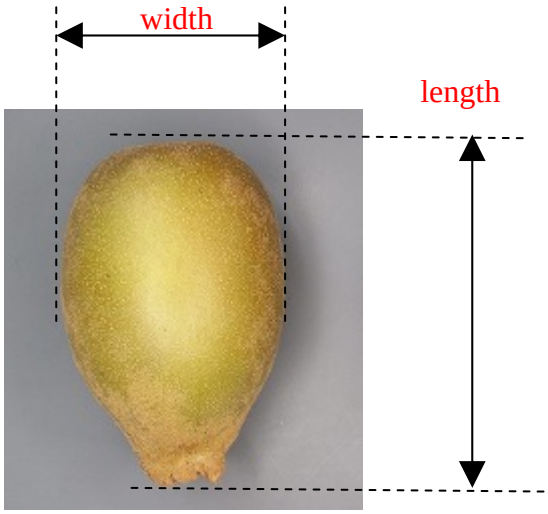
spheroid
5



obloid
6

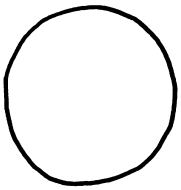
JP proposal, new AD

Ad. 66: Fruit: ratio of length/ width

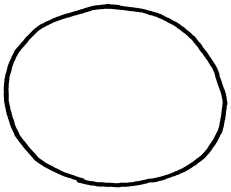


Ad. 67: Fruit: shape in cross section (at median)

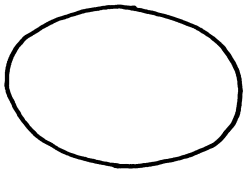
Ad. 89: Fruit: shape of core (in cross section)



circular
1



oblate
2



transverse elliptic
3

Ad. 68: Fruit: shape of stylar end

strongly depressed
1

weakly depressed
2

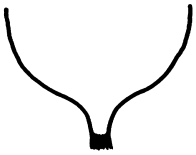
flat
3

rounded
4

weakly blunt protruding
5

strongly blunt protruding
6

weakly pointed protruding
7



strongly pointed protruding
8

JP Propose to replace

1
strongly depressed

2
weakly depressed

3
flat

4
rounded

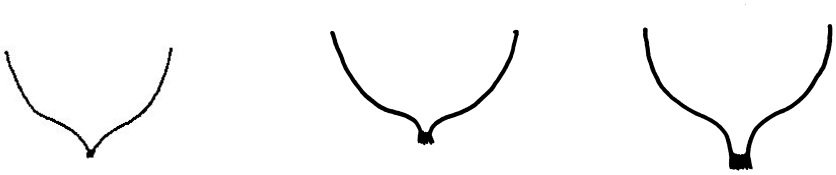
5
weakly blunt protruding

6
strongly blunt protruding

i.e status 7 and 8 are deleted.

Propose to add.

Ad. 69: Fruit: degree of pointed protusion on stylar end

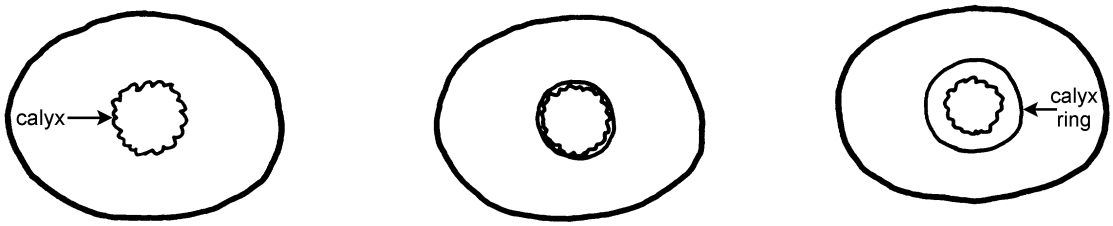


1
absent or weak

2
moderate

3
strongly

Ad. 70: Fruit: presence of calyx ring

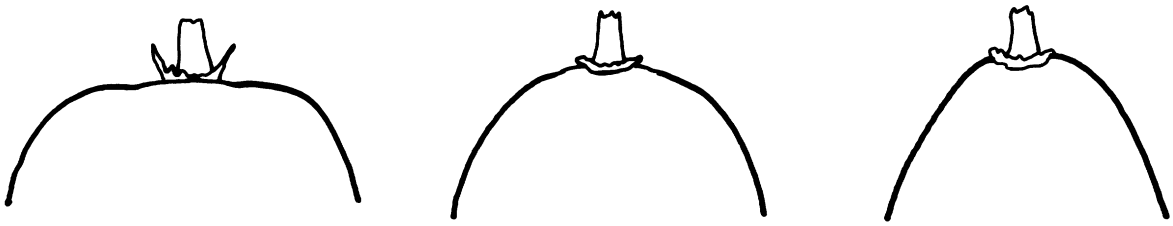


absent or weak
1

medium
2

strong
3

Ad. 71: Fruit: shape of shoulder at stalk end

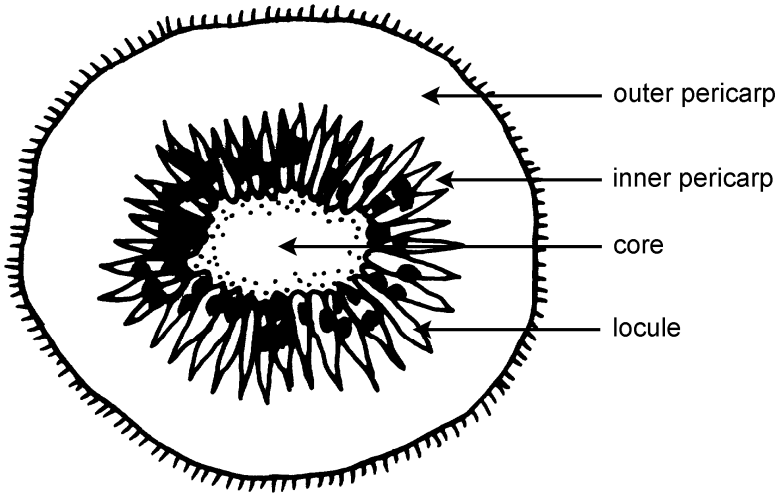


square
1

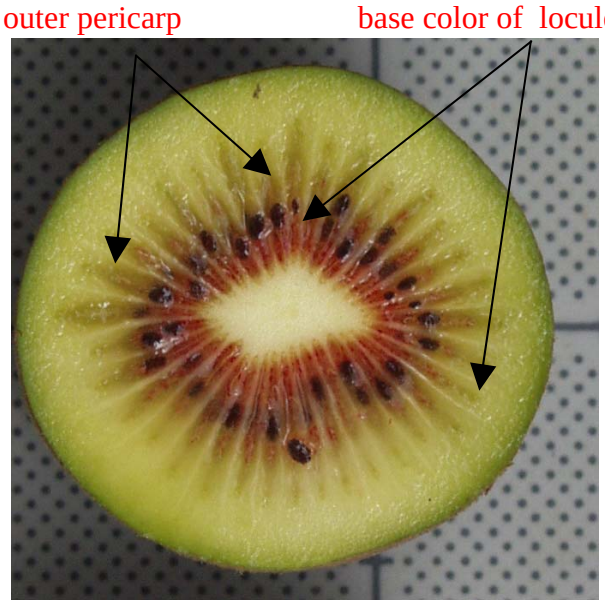
rounded
2

sloping
3

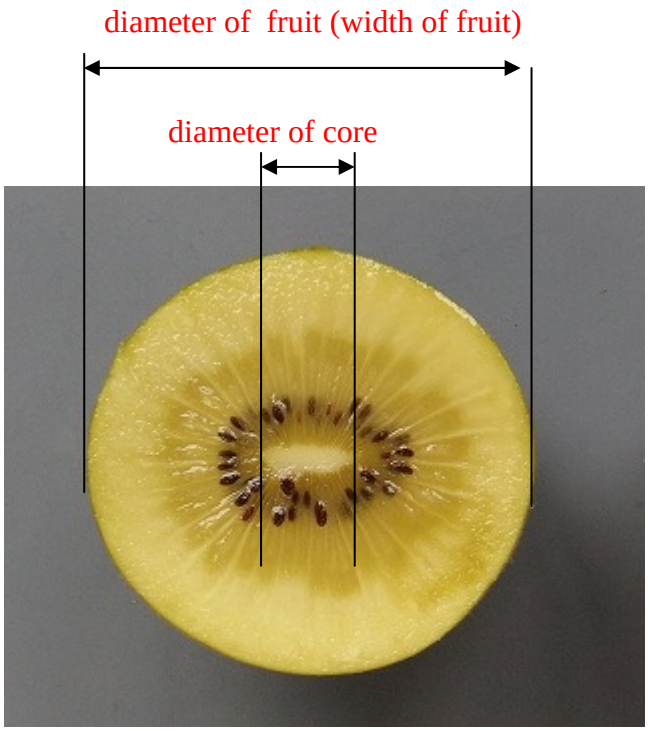
Ad. 85: Fruit: main color of outer pericarp
Ad. 86: Fruit: main color of inner pericarp (locules)
Ad. 87: Only varieties with reddish color in inner pericarp: Fruit: amount of color in locules
Ad. 88: Fruit: diameter of core relative to fruit
Ad. 91: Fruit: color of core



JP consider adding



JP consider new Ad. 88: Fruit: diameter of core relative to fruit



Ad. 92: Fruit: sweetness

The total soluble solids content (TSS) is measured.

Ad. 93: Fruit: acidity

Titratable acids are determined by titration.

9. Literature

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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 Genus

1.1.1 Botanical name	*Actinidia* Lindl.
1.1.2 Common name	Kiwifruit; Kiwi, Actinidia, Mihoutao

1.2 Species

1.2.1 Botanical name (please complete)	
1.2.2 Common name (please complete)	

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 varieties)

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

(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)

4.2 Method of propagating the variety

4.2.1 Vegetative propagation

(a) cuttings [ ]
(b) grafting (budding) [ ]
(c) in vitro propagation [ ]
(d) other (state method) [ ]

[#] 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:

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
	To be discussed		
	For male varieties		
5.1 (3)	**Plant: ploidy**		
	diploid	Hort16A (A), Kosui (B)	1[ ]
	tetraploid	Hortgem Tahi (B), Kaimutu (A)	2[ ]
	pentaploid	Shinzan (B)	3[ ]
	hexaploid	Hayward (A), Mitukou (B)	4[ ]
	octoploid		5[ ]
5.2 (95)	**Time of beginning of flowering**		
	early	Hort16A (A), Yukimusume (B)	3[ ]
	medium	Abbott (A), Kousui (B)	5[ ]
	late	Hayward (A)	7[ ]
	For female and hermaphrodite varieties		
5.3 (3)	**Plant: ploidy**		
	diploid	Hort16A (A), Kosui (B)	1[ ]
	tetraploid	Hortgem Tahi (B), Kaimutu (A)	2[ ]
	pentaploid	Shinzan (B)	3[ ]
	hexaploid	Hayward (A), Mitukou (B)	4[ ]
	octoploid		5[ ]

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

	Characteristics	Example Varieties	Note
5.4 (64)	**Fruit: size**		
	small	Hortgem Tahi (B), a-Gassan (B)	3[ ]
	medium	Tomua (A), Mitukou (B)	5[ ]
	large	Hayward (A), Sinzan (B)	7[ ]
	very large	Jade Moon (A), Kousui (B)	9[ ]
5.5 (65)	**Fruit: shape**		
	ellipsoid	Hayward (A), Mitukou (B)	1[ ]
	cylindric	Bruno (A)	2[ ]
	ovoid	Hort16A (A), Yamagataotome (B)	3[ ]
	obovoid	Monty (A)	4[ ]
	spheroid		5[ ]
	obloid	Kuimi (A), Sinzan (B)	6[ ]
5.6 (77)	**Fruit: shape**		
	very sparse	Topstar Vantini (A)	1[ ]
	sparse		3[ ]
	medium	Hayward (A)	5[ ]
	dense	Bruno (A)	7[ ]

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

	Characteristics	Example Varieties	Note
5.7 (85)	**Fruit: main color of outer pericarp**		
	light green	Sinzan (B)	1[ ]
	medium green	Hayward (A)	2[ ]
	dark green	Hortgem Toru (A)	3[ ]
	greenish yellow	Satoizumi (B)	4[ ]
	medium yellow	Hort16A (A), Kousui (B)	5[ ]
	dark yellow		6[ ]
	yellowish orange		7[ ]
	orange		8[ ]
	red		9[ ]
	red purple		10[ ]
5.8 (86)	**Fruit: main color of inner pericarp (locules)**		
	light green	Sinzan (B)	1[ ]
	medium green	Hayward (A)	2[ ]
	dark green	Hortgem Toru (B)	3[ ]
	greenish yellow	Satoizumi (B)	4[ ]
	medium yellow	Hort16A (A), Kousui (B)	5[ ]
	dark yellow		6[ ]
	yellowish orange		7[ ]
	orange		8[ ]
	red	Hortgem Rua (B) (JP?)	9[ ]
	red purple		10[ ]

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

	Characteristics	Example Varieties	Note
5.9 (96)	**Time of maturity for harvest**		
	early	Hortgem Tahi (B), Yamagatamusume (B)	3[ ]
	medium	Kousui (B), Tomua (A)	5[ ]
	late	Hayward (A), Yukimusume (B)	7[ ]

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	*[e.g. Fruit size]*	*[e.g. small]*	*[e.g. medium]*

Comments:

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

[#]7. Additional information which may help in the examination of the variety

7.1 In addition to the information provided in sections 5 and 6, are there any additional characteristics which may help to distinguish the variety?

Yes [ ] No [ ]

(If yes, please provide details)

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

Yes [ ] No [ ]

(If yes, please provide details)

7.3 Other information

A representative color photograph of the variety should accompany the Technical Questionnaire.

8. Authorization for release

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

Yes [ ] No [ ]

(b) Has such authorization been obtained?

Yes [ ] No [ ]

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

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

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

9. Information on plant material to be examined or submitted for examination.

9.1 The expression of a characteristic or several characteristics of a variety may be affected by factors, such as pests and disease, chemical treatment (e.g. growth retardants or pesticides), effects of tissue culture, different rootstocks, scions taken from different growth phases of a tree, etc.

9.2 The plant material should not have undergone any treatment which would affect the expression of the characteristics of the variety, unless the competent authorities allow or request such treatment. If the plant material has undergone such treatment, full details of the treatment must be given. In this respect, please indicate below, to the best of your knowledge, if the plant material to be examined has been subjected to:

(a) Microorganisms (e.g. virus, bacteria, phytoplasma) Yes [ ] No [ ]

(b) Chemical treatment (e.g. growth retardant, pesticide) Yes [ ] No [ ]

(c) Tissue culture Yes [ ] No [ ]

(d) Other factors Yes [ ] No [ ]

Please provide details for where you have indicated “yes”.

……

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

Yes [ ]

(please provide details as specified by the Authority)

No [ ]

10. I hereby declare that, to the best of my knowledge, the information provided in this form is correct:

Applicant’s name

Signature Date

[End of document]