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UPOV

INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

GENEVA

DRAFT

JAPANESE PLUM

UPOV Code: PRUNU_SAL

Prunus salicina Lindl.

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GUIDELINES

FOR THE CONDUCT OF TESTS

FOR DISTINCTNESS, UNIFORMITY AND STABILITY

prepared by an expert from the European Community

to be considered by the
Technical Working Party for Fruit Crops
at its thirty-ninth session, to be held in Lisbon, Portugal, from June 2 to 6, 2008

Alternative Names:*

Botanical name	*English*	*French*	*German*	*Spanish*
Prunus salicina Lindl., *Prunus salicin* var. *mandshurica*	Japanese plum	Prunier Japonais	Ostasiatische Pflaume, Chinesischer Pflaumenbaum	Ciruelo Japonés

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.

* 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.]

ASSOCIATED DOCUMENTS

These Test Guidelines should be read in conjunction with the General Introduction and its associated TGP documents.

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1. Subject of these Test Guidelines

These Test Guidelines apply to all varieties of vegetatively propagated fruit varieties of *Prunus salicina* Lindl. and other diploid plums.

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 ….

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

- 5 budsticks with sufficient buds to propagate 5 trees (to be sent at budding time); or
- 5 dormant shoots for grafting, sufficient to propagate 5 trees (to be sent at grafting time); or
- 5 virus-tested one-year-old trees grafted on 'Myrobalan 29C' or another rootstock selected by the testing authority

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

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

3. Method of Examination

3.1 Number of Growing Cycles

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

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

3.2 Testing Place

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

3.3 Conditions for Conducting the Examination

3.3.1 The tests should be carried out under conditions ensuring satisfactory growth for the expression of the relevant characteristics of the variety and for the conduct of the

examination. Trees should only be pruned in the year of planting to ensure good branch formation.

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

3.3.3 Stage of development for the assessment

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

3.3.4 Type of observation

proposal by JP to delete section 3.3.4 since it is not applicable to this guideline

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
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

3.3.5 Because daylight varies, color determinations made against a color chart should be made either in a suitable cabinet providing artificial daylight or in the middle of the day in a room without direct sunlight. The spectral distribution of the illuminant for artificial daylight should conform with the CIE Standard of Preferred Daylight D 6500 and should fall within the tolerances set out in the British Standard 950, Part I. These determinations should be made with the plant part placed against a white background.
Proposal by JP to delete section 3.3.5 since it is not applicable to this guideline

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 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 5 plants or parts taken from each of 5 plants. In the case of parts of plants, the number to be taken from each of the plants should be 2.

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 5 plants, no off-types are allowed.

4.3 Stability

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

4.3.2 Where appropriate, or in cases of doubt, stability may be 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.

5.3 The following have been agreed as useful grouping characteristics:

(a) Fruit: size (characteristic 30)
(b) Fruit: ground color of skin (characteristic 38)
(c) Fruit: hue of over-color (characteristic 40)
(d) Fruit: color of flesh (41)
(e) Time of beginning of flowering (characteristic 61)
(f) Time of beginning of fruit ripening (characteristic 62)

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.

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, VG, VS: See Chapter 3.3.4

Proposal to delete “MG, MS, VG, VS” since they are not applicable to this guideline

(a)-(c) 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.	**Tree: vigor**					
QN	weak				Black Gold	3
	medium				Black Diamond	5
					Autumn Giant	
	strong				Robusto, Royal Diamond, Taiyou	7

Proposal to delete characteristic 2.: difficult to evaluate due to the necessity to prune the trees

2.	**Tree: density of the crown**					
QN	sparse				Lamoon	3
	medium				Anne Gold, Carmen	5
	dense					7

Proposal by ZA to add a newcharacteristic:

New 1	**Tree: type of bearing**					
PQ	on spurs only					1
	spurs and long shoots					2
	long shoots only					3
3.	**Tree: habit**					
PQ	upright				Larry Ann, Taiyou	1
	semi-upright				Laroda	3
	spreading				Shiro	5
	drooping				Weeping Santa Rosa	7

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
4. **(+ ?)**		**One-year old shoot: intensity of color (sunny side; after removal of cuticle)**					
QN	**(a)**	light				Santa Rosa	3
		medium				Nubiana	5
		dark				George Wilson	7
5.		**Spur: length**					
QN		short				Laroda	3
		medium				Frontier	5
		long				October Purple	7
Proposal to delete characterisctic 6.: difficult to evaluate							
6. **(+)**		**One-year-old shoot: size of vegetative bud**					
QN	(a)	very small				October Purple	1
		small				Harry Pickstone	3
		medium				Great Yellow	5
		large					7
Proposal to delete characteristic 7.: difficult to evaluate; furthermore, most vegetative buds are acute							
7. **(+)**		**One-year-old shoot: shape of vegetative bud**					
PQ	**(a)**	acute				Eldorado	1
		obtuse				Songold	2
		rounded				Satsuma	3

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
8. **(+)**		**One-year-old shoot: position of vegetative bud in relation to shoot**					
PQ	**(a)**	adpressed				Queen Ann	1
		slightly held out				Satsuma	2
		markedly held out				Songold	3
Proposal by JP to add a new characteristic: Leaf: size							
New 2		**Leaf: size**					
9.		**Leaf blade: attitude in relation to shoot**					
PQ	**(a)**	upwards				Menthley	3
		horizontal				October Purple	5
		downwards				Queen Ann	7
Proposal by ZA to add a new characteristic:							
New 3		**Leaf blade: length/width ratio**					
QN	**(a)**	very small					1
		small					3
		medium					5
		large					7
		very large					9
10. **(*)** **(+)**		**Leaf blade: shape [new states of expression!]**					
PQ	**(a)**	ovate					1
		elliptic				October Purple, Taiyou	2
		obovate				Red Ace	3
		circular					4

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
11. (*) (+)		**Leaf blade: angle of apex (excluding tip)**					
PQ	**(a)**	acute				Ozark Premier, Taiyou	1
		right angled				Satsuma	2
		obtuse				Methley	3
12.		**Leaf blade: intensity of green color of upper side**					
QN	**(a)**	light				Flaming Delicious, Taiyou	3
		medium				Abundance	5
		dark				Gaviota	7

Proposal by CA to have a condensed scale for characteristic 13: “1: absent or very weak”, “2: medium”, “3: strong”

13.		**Leaf: glossiness of upper side**					
QN	**(a)**	weak				Ozark Premier, Taiyou	3
		medium				Frontier	5
		strong				Nubiana	7

Proposal by CA to have a condensed scale for characteristic 14: “1: absent or very weak”, “2: medium”, “3: strong”

14.		**Leaf blade: Pubescence of <u>lower</u> side**					
QN	**(a)**	weak				Redheart, Taiyou	3
		medium				Queen Ann	5
		strong					7

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
15. **(+)**		**Leaf blade: incisions of margin**					
PQ	**(a)**	crenate				Santa Rosa	1
		crenate to serrate				Taiyou	2
		serrate				Satsuma	3
Alternative proposal from ZA for states of expression for characteristic 15:							
		crenate					1
		bi-crenate					2
		serrate					3
		bi-serrate					4
16. **(*)**		**Petiole: length**					
QN		short				Kelsey	3
		medium				Frontier	5
		long					7
Proposal by JP to delete characteristic 17: considered to be unimportant							
Proposal by CA to have a condensed scale for characteristic 17: “1: absent or very weak”, “2: medium”, “3: strong”							
17.		**Petiole: pubescence of upper side**					
QN		absent or very weak				Mariposa	1
		weak				Red Heart	3
		medium					5
		strong					7
		very strong					9

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
Proposal by JP and ZA to delete characteristic 18: considered to be unimportant							
18.		**Petiole: depth of groove**					
QN		shallow				Abundance	3
		medium				Flaming Delicious	5
		deep				Eclipse	7
19.		**Leaf: position of nectaries**					
PQ	**(a)**	predominantly on base of blade				Methley	1
		equally on base of leaf blade and petiole				Nubiana	2
		predominatly on petiole				Queen Ann	3
20. (*)		**Pedicel: length**					
QN		short				Methley	3
		medium				Queen Ann	5
		long				Red Ace, Taiyou	7
Proposal by JP to delete characteristic 21: absent state has never been observed (at least flowers exist at top of one-year-old shoot)							
21.		**One-year-old shoot: flowers**					
QL	**(a)**	absent					1
		present					9

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
Proposal by JP to change wording of characteristic 22 into: Flowers: type ;with states of expression “single”, “semi-double”, “double” (their experience is that they find not double but more than five petals mixing)							
22.		**Flowers: frequency of flowers with double petals**					
QN	**(b)**	none or very few				Harry Pickstone	1
		few				Laroda	3
		medium					5
		many					7
		very many					9
Proposal to delete characteristic 23.: corrolation with characteristic 26							
23.		**Flower: size**					
QN	**(b)**	small				Nubiana	3
		medium				October Purple, Taiyou	5
		large				Methley	7
24. **(+)**		**Flower: arrangement of petals (flowers with 5 petals only)**					
QN	**(b)**	free				Apple	3
		touching				Harry Pickstone	5
		overlapping				Beauty	7
25.		**Sepal: shape**					
(+ ?)							
PQ	**(b)**	narrow elliptic				Laroda	1
		elliptic				Nubiana	2
		ovate				Harry Pickstone	3
		broad ovate				George Wilson	4
		triangular				Mariposa	5

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
Proposal by CA to change wording of chaacteristic 26: Petal: length/width ratio							
26.		**Petal: size**					
QN	**(b)**	small				Laroda	3
		medium				Eclipse, Taiyou	5
		large					7
27. **(*)** **(+)**		**Petal: shape**					
PQ	**(b)**	elliptic				Red Ace, Taiyou	1
		obovate				Mammoth Cardinal	2
		circular				Wickson	3
		transverse broad				Wright's Early	4
28.		**Petal: undulation of margin**					
QN	**(b)**	weak				Redheart, Taiyou	3
		medium				Queen Ann	5
		strong					7
Proposal by CA to have a condensed scale for characteristic 29: "1, 2, 3"							
29.		**Stigma: position in relation to anthers**					
PQ	**(b)**	below				Mariposa	3
		same level				Methley	5
		above				Mammoth Cardinal	7

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
30. (*)		**Fruit: size**					
QN	**(c)**	very small				Methley	1
		small				Allo, Eldorado	3
		medium				Shiro	5
		large				Angeleno, Taiyou	7
		very large				Songold	9

Proposal by ZA to add a new characteristic:

New 4		**Fruit: length/width ratio**					
QN	**(a)**	very small					1
		small					3
		medium					5
		large					7
		very large					9
31. (*) (+ ?)		**Fruit: general shape (in lateral view)**					
PQ	**(c)**	oblong				Reubennel	1
		elliptic				Ozark Premier, Taiyou	2
		rounded				Shiro, Red Beaut	3
		oblate				Friar	4
		cordate				Morettini 355	5
		obovate					6
		obcordiform (heart-shape)				Santa Rosa	7

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
Proposal to delete characeristic 32.							
32. (*)		**Fruit: position of maximum diameter**					
QN	**(c)**	towards stalk end				Eldorado	3
		at center				Frontier	5
		towards pistil end					7
33. (*) (+ ?)		**Fruit: symmetry (ventral view, along suture)**					
PQ	**(c)**	asymmetric				Harry Pickstone	1
		symmetric				Laroda	2
34. (*)		**Fruit: shape of apex**					
PQ	**(c)**	pointed				Morettini 55, Taiyou	1
		flat				Black Gold, Green Sun	2
		depressed				Calita, Durado	3
35. (new) (+ ?)		**Fruit: shape of base**					
PQ	**(c)**	pointed				Golden Plumza	1
		rounded				Shiro	2
		flattened				Angeleno	3
Proposal by JP to add new characteristic:							
New 5		**Fruit: length of stalk**					
(+)							
QN	**(c)**	short					3
		medium					5
		long					7

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
36. (old 35)		**Fruit: depth of stalk cavity**					
QN	**(c)**	shallow				Taiyou	3
		medium				Nubiana	5
		deep				Black Gold	7
Proposal by JP to add new characteristic:							
New 6 (+)		**Fruit: width of stalk cavity**					
QN	**(c)**	narrow					3
		medium					5
		broad					7
Proposal by JP to reword characteriestic 37 to: Fruit: depth of suture ; with states of expression “shallow”, “medium”, “deep”							
37. (new) (+ ?)		**Fruit: shape of suture**					
PQ	**(c)**	rounded				Black Gold	1
		depressed				Carmen, Friar	2
Proposal by JP to add new characteristic:							
New 7 (*)		**Fruit: skin bloom**					
QL	**(c)**	absent					3
		present					5

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
38. (old 36) (*)		**Fruit: ground color of skin [without bloom?]**					
PQ	**(c)**	not visible				Angeleno	1
		whitish					2
		green				Gaviota, Reina Claudia, Santa Rosa	3
		yellowish-green				Songold	4
						Taiyou	
		yellow				Shiro	5
39. (*) (new)		**Fruit: relative area of over-color**					
QN	**(c)**	absent or very small				Green Sun, Shiro	1
		small					3
		medium				Fortune	5
		large				Angeleno, Taiyou	7
		very large					9
40. (*) (new)		**Fruit: hue of over-color [without bloom?]**					
PQ	**(c)**	absent [delete state ?]				Shiro	1
		yellow				Golden Japan	2
		orange-yellow					3
		red				Red Beauty, Sun Gold,Taiyou	4
		purple					5
		violet-blue					6
		dark blue				Black Amber	7
		black				Angeleno	8

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
Proposal from ZA for a new characteristic:							
New 8		**Fruit: type of overcolor**					
PQ	**(c)**	isolated flecks					1
		solid flush					2
		covered all over with small flecks					3
		solid flush with flecks					4
Proposal from ZA for a new characteristic:							
New 9		**Fruit: amount of lenticels**					
QN	**(c)**	few					3
		medium					5
		many					7
Proposal from ZA for a new characteristic:							
New 10		**Fruit: lenticel size**					
QN	**(c)**	small					3
		medium					5
		large					7
Proposal from ZA for a new characteristic:							
New 11		**Fruit: waxiness of skin**					
QN	**(c)**	absent or very weak					1
		weak					3
		medium					5
		strong					7
		very strong					9

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
41. (old 37) (*)		**Fruit: color of flesh**					
PQ	**(c)**	whitish				Taiyou	1
		green				Reina Claudia, Santa Rosa	2
		yellowish green					3
		yellow				Angeleno, Golden Japan, Reubennel	4
		orange				Black Amber, Sun Gold	5
		red				Santa Rosa	6
42. (old 38)		**Fruit: firmness of flesh**					
QN	**(c)**	soft				Shiro	3
		medium				Frontier	5
		firm				Laroda	7
43. (old 39)		**Fruit: juiciness**					
QN	**(c)**	low				Autumn Giant, Laroda	3
		medium				Gaviota, Ozark Premier	5
		high				Reubennel, Shiro, Taiyou	7
44. (old 40)		**Fruit: acidity**					
QN	**(c)**	low				Durado	3
		medium				Shiro, Taiyou	5
		high				Carmen, Obilnaja	7
45. (old 41)		**Fruit: sweetness**					
QN	**(c)**	low				Durado, Obilnaja	3
		medium				Angeleno, Shiro, Taiyou	5
		high				Black Gold, Laroda	7

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
46. (old 42) (*)		**Fruit: degree of adherence of stone to flesh**					
PQ	**(c)**	non-adherent				Fortune	1
		semi-adherent				Nubiana, Taiyou	2
		adherent				Sungold	3
47. (old 43) (*)		**Stone: size**					
QN	**(c)**	small				Eldorado	3
		medium				Wickson, Taiyou	5
		large					7
48. (old 44) (*) (+ ?)		**Stone: general shape in lateral view (ratio length/width)**					
PQ	**(c)**	narrow elliptic				Eldorado	1
		[medium ?] elliptic				Santa Rosa, Taiyou	2
		circular				Kelsey	3
49. (old 45)		**Stone: shape in <u>ventral</u> view**					
(+)							
PQ	**(c)**	narrow elliptic				Eldorado	1
		[medium ?] elliptic				Santa Rosa, Taiyou	2
		broad elliptic				Kelsey	3
50. (old 46) (+ ?)		**Stone: shape in <u>basal</u> view**					
PQ	**(c)**	narrow elliptic					1
		[medium ?] elliptic					2
		broad elliptic					3

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
51. (old 47)		**Stone: symmetry in lateral view**					
PQ	**(c)**	asymmetric				Santa Rosa	1
		symmetric				Frontier, Taiyou	2

Proposal to delete characteristic 52. (old 48)

52. (old 48		**Stone: symmetry in ventral view**					
PQ	**(c)**	asymmetric				Songold	1
		symmetric				Nubiana	2

Proposal by CA to merge characteristic 53 with characterisitc 49. Additional shapes could be added to characteristic 49, such as "ovate" and "obovate", assuming these shapes exist. Then an additional characteristic could be added for length/width ratio using states such as elongated, compressed, etc.

53. (old 49) (*)		**Stone: position of maximum width (in ventral view)**					
PQ	**(c)**	towards stalk end				Harry Pickstone	1
		at centre				Songold, Taiyou	2
		towards pistil end				Nubiana	3

Proposal by JP to delete characteristic 54: difficult to evaluate objectively

54. (old 50) (+?)		**Stone: texture of lateral surfaces**					
PQ	**(c)**	fine grained				Eldorado	1
		granular				Nubian	2
		rough				Songold	3
		hammered				Harry Pickstone	4

Proposal to delete characteristic 55. (old 51)

55. (old 51)		**Stone: margins of dorsal groove**					
QL	**(c)**	entire				Harry Pickstone	1
		broken				Santa Rosa	2

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
Proposal to delete characteristic 56. (old 52)							
56. (old 52)		**Stone: sharpness of the edge**					
QN	**(c)**	weak				Santa Rosa	3
		medium				Nubia	5
		strong				Laroda	7
Proposal to delete characterisitc 57. (old 53)							
57. (old 53)		**Stone: width of ventral zone**				Laroda	3
QN	**(c)**	narrow				Songold	5
		medium					7
		broad					
58. (old 54)		**Stone: width of stalk-end**					
(+)							
QN	**(c)**	narrow				Frontier	3
		medium				Harry Pickstone	5
		broad					7
59. (old 55)		**Stone: angle of stalk-end**					
(+)							
PQ	**(c)**	acute				Laroda	1
		right angled				Santa Rosa	2
		obtuse				Nubiana	3

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
60. (old 56)		**Stone: shape of pistil end**					
(+)							
PQ	**(c)**	pointed					1
		intermediate				Songold	2
		rounded				Eldorado	3
61. (old 57) (*)		**Time of beginning of flowering**					
QN		very early				Durado, Red Beauty	1
		early				Fortune, Mariposa, Taiyou	3
		medium				Green Sun, Nubiana	5
		late				Gaviota, Shiro	7
		very late				Angeleno, Simka	9
62. (old 58) (*) (+)		**Time of beginning of fruit ripening**					
QN		very early				Beauty, Durado, Red Noble	1
		early				Mariposa, Shiro	3
		medium				Black Gold, Gaviota	5
		late				Angeleno, Nubiana, Taiyou	7
		very late				Autumn Giant, Golden King	9

8. Explanations on the Table of Characteristics

8.1 Explanations covering several characteristics

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

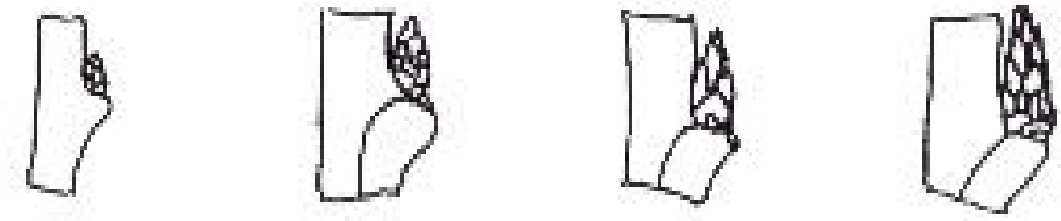
(a) All observations on the bud, the leaf and the shoot should be made at the central third of the shoot. The observations on the leaf should be made on mature leaves from current season's shoots.

(b) All observations on the flower should be made at the time of full flowering.

(c) All observations on the fruit should be made at full maturity for consumption.

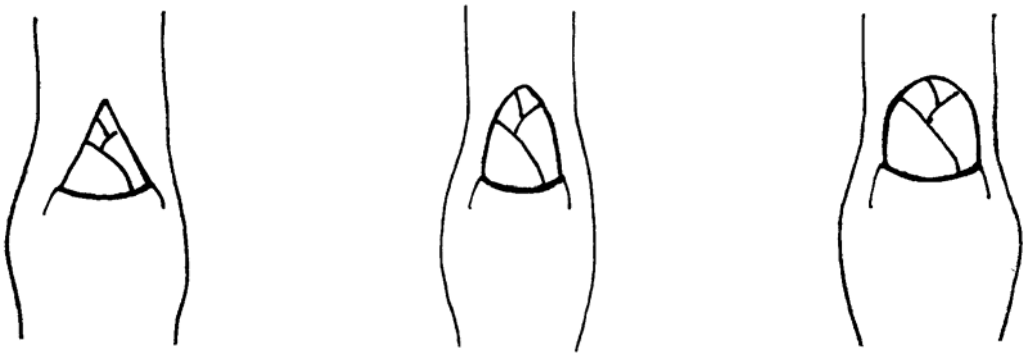
8.2 Explanations for individual characteristics

Ad 6: One year-old shoot: size of vegetative bud



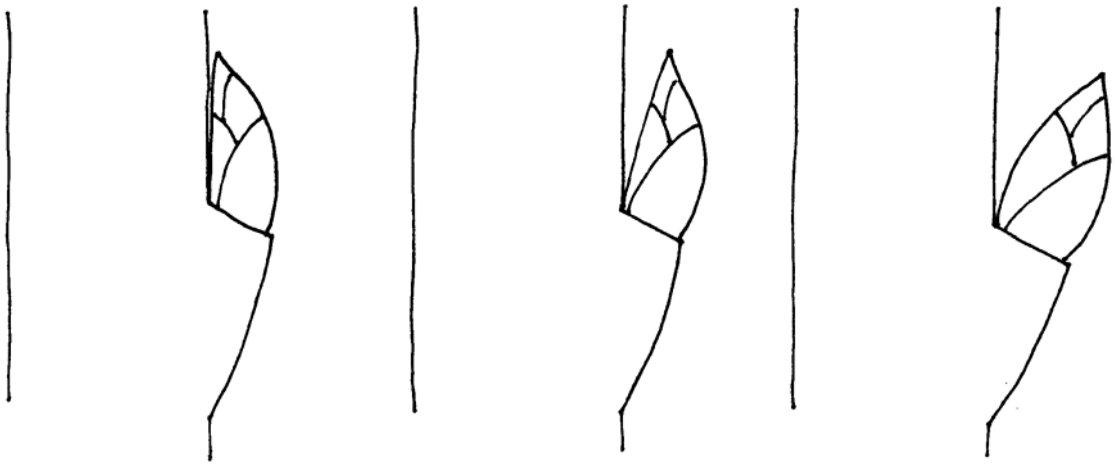
1	3	5	7
very small	small	medium	large

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



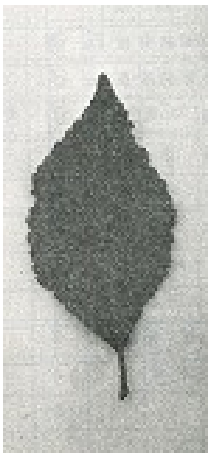
1	2	3
acute	obtuse	rounded

Ad 8: One year-old shoot: shape of vegetative bud relative to shoot



1	2	3
adpressed	slightly held out	markedly held out

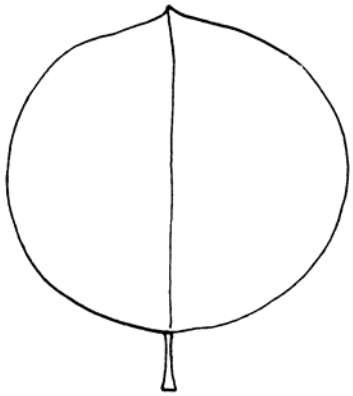
Ad 10: Leaf blade: shape



1
ovate

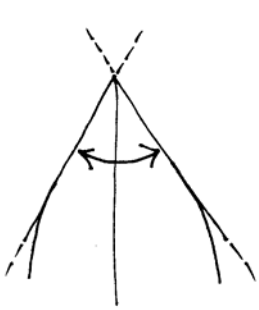
2
elliptic

3
obovate

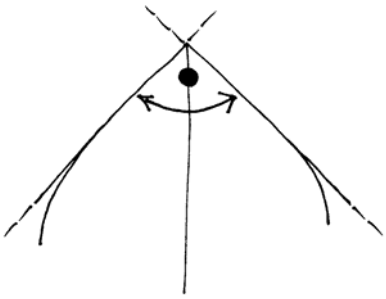


4
circular

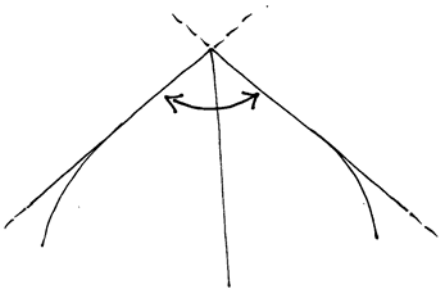
Ad 11: Leaf blade: angle of apex (excluding tip)



1
acute



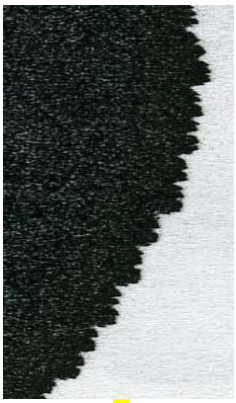
2
right angled



3
obtuse

Ad 15: Leaf blade: incisions of margin

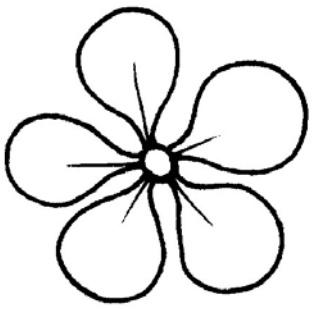
1
crenate

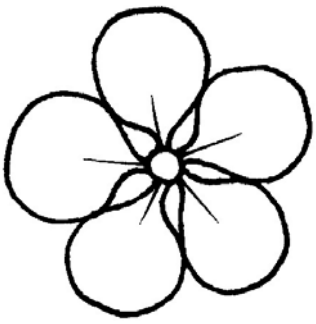


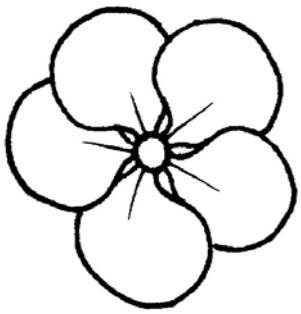
2
crenate to serrate

3
serrate

Ad 24: Flower: arrangement of petals (flowers with 5 petals only)

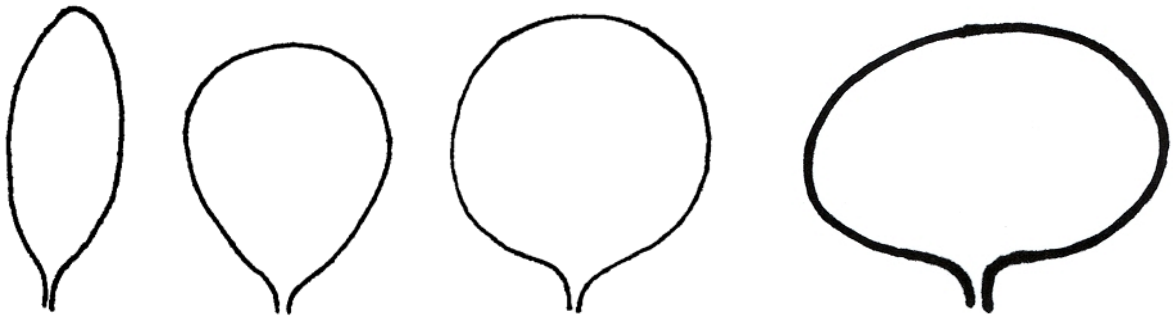






3	5	7
free	touching	overlapping

Ad 27: Petal: shape

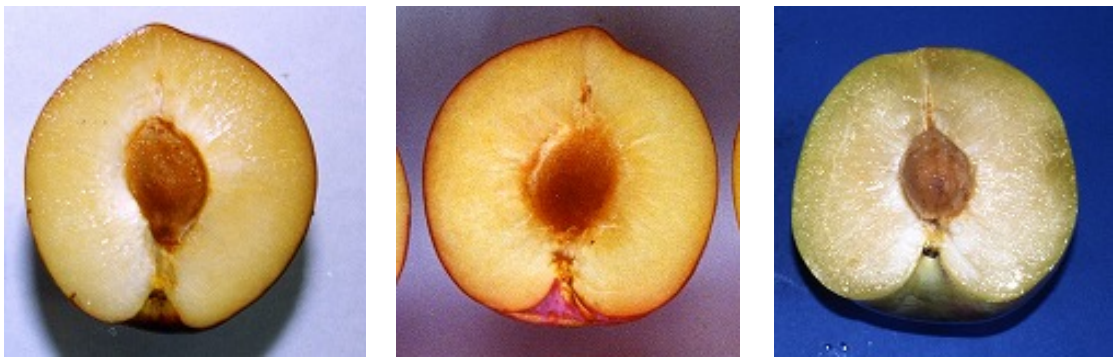


1	2	3	4
elliptic	obovate	circular	transverse broad

New proposal from JP:
Ad. New 5: Fruit: length of stalk

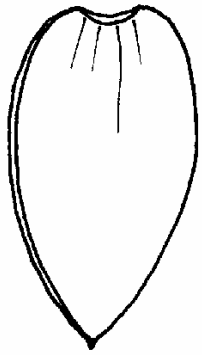
3	5	7
short	medium	long

New proposal from JP:
Ad. New 6: Fruit: width of stalk cavity



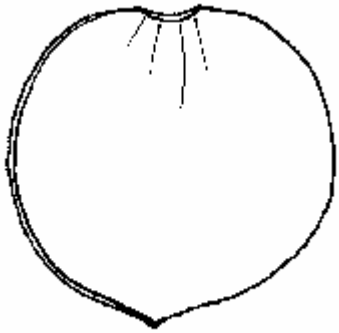
3	5	7
narrow	medium	broad

Ad 49: Stone: shape in ventral view [do these drawings relate to characteristic 48 instead?!]



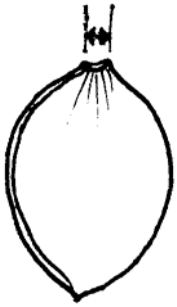
1
narrow elliptic

2
elliptic

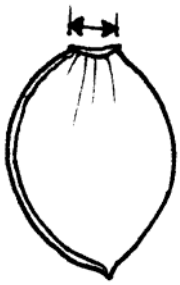


3
circular

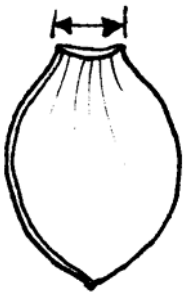
Ad 58: Stone: width of stalk-end



3
narrow

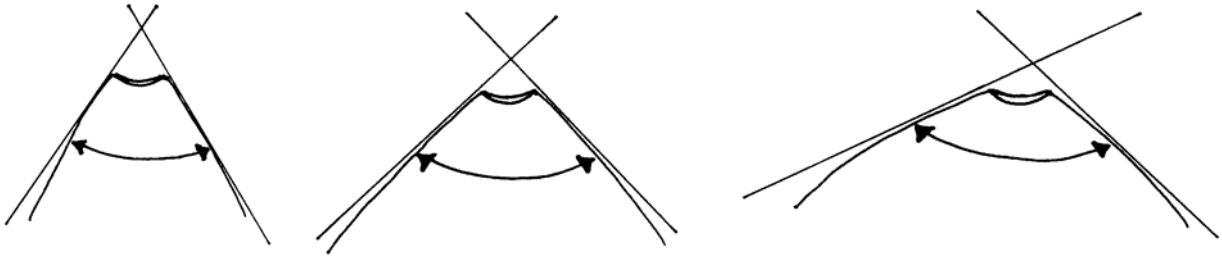


5
medium



7
broad

Ad 59: Stone: angle of stalk-end

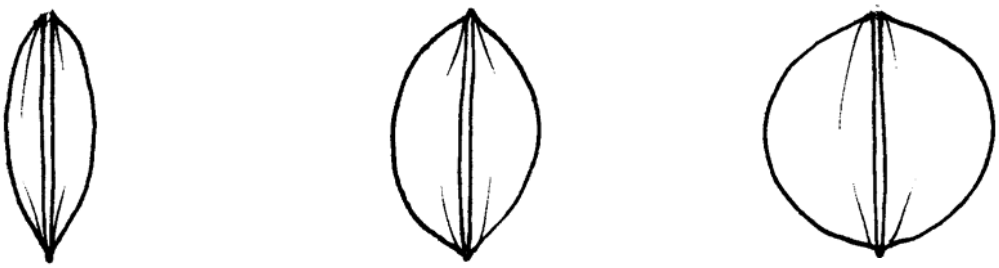


1
acute

2
right angled

3
obtuse

Ad 60: Stone: shape of pistil end



1
pointed

2
intermediate

3
rounded

Ad. 62: Time of beginning of fruit ripening

The time of fruit ripening should be considered as the time of eating ripeness, when the fruit is most easily removed.

9. Literature

No specific literature

10. Technical Questionnaire

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

	Application date: (not to be filled in by the applicant)

TECHNICAL QUESTIONNAIRE
to be completed in connection with an application for plant breeders' rights

1. Subject of the Technical Questionnaire

1.1 Botanical name	*Prunus salicina* Lindl.
1.2 Common name	Japanese plum

2. Applicant

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

3. Proposed denomination and breeder's reference

Proposed denomination (if available)	
Breeder's reference	

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

[#]4. Information on the breeding scheme and propagation of the variety

4.1 Breeding scheme

Variety resulting from:

4.1.1 Crossing

(a) controlled cross [ ]
(please state parent varieties)

(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) *in vitro* propagation [ ]

(c) other (state method) [ ]

4.2.2 Seed [ ]

4.2.3 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:

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 (30)	**Fruit: size**		
	very small	Methley	1[ ]
	small	Allo Eldorado	3[ ]
	medium	Shiro	5[ ]
	large	Angeleno, Taiyou	7[ ]
	very large	Songold	9[ ]
5.2 (38)	**Fruit: ground color of skin**		
	not visible	Angeleno	1[ ]
	whitish		2[ ]
	green	Gaviota, Reina Claudia, Santa Rosa	3[ ]
	yellowish-green	Songold, Taiyou	4[ ]
	yellow	Shiro	5[ ]
5.3 (40)	**Fruit: hue of over-color**		
	absent	Shiro	1[ ]
	yellow	Golden Japan	2[ ]
	orange-yellow		3[ ]
	red	Red Beauty, Sun Gold, Taiyou	4[ ]
	purple		5[ ]
	violet-blue		6[ ]
	dark blue	Black Amber	7[ ]
	black	Angeleno	8[ ]

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

5.4 (41)	**Fruit: color of flesh**		
	whitish	Taiyou	1[ ]
	green	Reina Claudia, Santa Rosa	2[ ]
	yellowish green		3[ ]
	yellow	Angeleno, Golden Japan, Reubennel	4[ ]
	orange	Black Amber, Sun Gold	5[ ]
	red	Santa Rosa	6[ ]
5.5 (61)	**Time of beginning of flowering**		
	very early	Durado, Red Beaut	1[ ]
	early	Fortune, Mariposa, Taiyou	3[ ]
	medium	Green Sun, Nubiana	5[ ]
	late	Gaviota, Shiro	7[ ]
	very late	Angeleno, Simka	9[ ]
5.6 (62)	**Time of beginning of fruit ripening**		
	very early	Beauty, Durado, Red Noble	1[ ]
	early	Mariposa, Shiro	3[ ]
	medium	Black Gold, Gaviota	5[ ]
	late	Angeleno, Nubiana, Taiyou	7[ ]
	very late	Autumn Giant, Golden King	9[ ]

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

6. Similar varieties and differences from these varieties

Please use the following table and box for comments to provide information on how your candidate variety differs from the variety (or varieties) which, to the best of your knowledge, is (or are) most similar. This information may help the examination authority to conduct its examination of distinctness in a more efficient way.

Denomination(s) of variety(ies) similar to your candidate variety	Characteristic(s) in which your candidate variety differs from the similar variety(ies)	Describe the expression of the characteristic(s) for the **similar** variety(ies)	Describe the expression of the characteristic(s) for **your** candidate variety
Example	*Fruit: color of flesh*	*orange*	*red*

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]