

JAPANESE QUINCE (*CHAENOMELES* SPP.) DESCRIPTORS

I PASSPORT DESCRIPTORS

The descriptors are numbered according to the FAO/IPGRI multi-crop passport descriptors (MCPD). Only the four fields identifying the accession are mandatory, all other fields are highly recommended. The mandatory fields are NICODE (0), INSTCODE (1), ACCENUMB (2) and GENUS (5). The combination of these fields has to be unique.

EURISCO DESCRIPTORS	
I/0. National Inventory code	(NICODE)
Code identifying the National Inventory; the code of the country preparing the National Inventory. Exceptions are possible, if agreed with EURISCO such as NGB. ISO 3166-1 Code List can be found at: http://www.un.org/Depts/unsd/methods/m49alpha.htm	
Example: LVA	
I/1. Institute code	(INSTCODE)
FAO Institute Code of the institute where the accession is maintained. These codes are available from http://apps3.fao.org/wiews/	
Example: LVA00919	
I/2. Accession number	(ACCENUMB)
This number serves as a unique identifier for accessions within a gene bank collection, and is assigned when a sample is entered into the gene bank collection.	
Example: LVA 00406	
I/3. Collecting number	(COLLNUMB)
Original number assigned by the collector(s) of the sample, normally composed of the name or initials of the collector(s) followed by a number. This number is essential for identifying duplicates held in different collections.	
Example: FA90-110	
I/4. Collecting institute code	(COLLCODE)
Code of the Institute collecting the sample. If the holding institute has collected the material, the collecting institute code (COLLCODE) should be the same as the holding institute code (INSTCODE).	
Example: NLD037	
I/5. Genus	(GENUS)
Genus name for taxon, in Latin. Initial uppercase letter required.	
Example: Allium	
I/6. Species	(SPECIES)
Specific epithet portion of the scientific name, in Latin, in lowercase letters. Following abbreviation is allowed: 'sp.'	
Example: paniculatum	
I/7. Species authority	(SPAUTHOR)

The authority for the species name.	
Example: L.	
I/8. Subtaxa	(SUBTAXA)
Subtaxa can be used to store any additional taxonomic identifier, in latin. Following abbreviations are allowed: 'subsp.' (for subspecies); 'convar.' (for convariety); 'var.' (for variety); 'f.' (for form).	
Example: subsp. fuscum	
I/9. Subtaxa authority	(SUBTAUTHOR)
The subtaxa authority at the most detailed taxonomic level.	
Example: (Waldst. Et Kit.) Arc.	
I/10. Common crop name	(CROPNAME)
Name of the crop in English.	
Example: malting barley	
Example: cauliflower	
I/11. Accession name	(ACCENAME)
Either a registered or other formal designation given to the accession. First letter uppercase. Multiple names separated with semicolon without space.	
Example: Rheinische Vorgebirgstrauben;Emma;Avlon	
I/12. Acquisition date	(ACQDATE)
Date on which the accession entered the collection as YYYYMMDD. Missing data (MM or DD) should be indicated with hyphens. Leading zeros are required.	
Example: 1968----	
Example: 20020620	
I/13. Country of origin	(ORIGCTY)
Code of the country in which the sample was originally collected.	
Example: LVA	
I/14. Location of collecting site	(COLLSITE)
Location information below the country level that describes where the accession was collected. This might include the distance in kilometres and direction from the nearest town, village or map grid reference point.	
Example: 7 km south of Curitiba in the state of Parana	
I/15. Latitude of collecting site	(LATITUDE)
Degree (2 digits) minutes (2 digits), and seconds (2 digits) followed by N (North) or S (South). Every missing digit (minutes or seconds) should be indicated with a hyphen. Leading zeros are required.	
Example: 10 ---S	
Example: 011530N	
Example: 4531--S	
I/16. Longitude of collecting site	(LONGITUDE)
Degree (3 digits), minutes (2 digits), and seconds (2 digits) followed by E (East) or W (West). Every missing digit (minutes or seconds) should be indicated with a hyphen. Leading zeros are required.	
Example: 0762510W	

Example: 076--- W	
I/17. Elevation of collecting site	(ELEVATION)
Elevation of collecting site expressed in meters above sea level. Negative values are allowed.	
Example: 763	
I/18. Collecting date of sample	(COLLDATE)
Collecting date of the sample as YYYYMMDD. Missing data (MM or DD) should be indicated with hyphens. Leading zeros are required.	
Example: 1968----	
Example: 20020620	
I/19. Breeding institute code	(BREDCODE)
FAO Institute Code of the institute that has bred the material.	
I/20. Biological status of accession	(SAMPSTAT)
The coding scheme proposed can be used at 3 different levels of detail: either by using the general codes (in boldface) such as 100, 200, 300, 400 or by using the more specific codes such as 110, 120 etc.	
100) Wild 110) Natural 120) Semi-natural/wild 200) Weedy 300) Traditional cultivar/landrace 400) Breeding/research material 410) Breeder's line 411) Synthetic population 412) Hybrid 413) Founder stock/base population 414) Inbred line (parent of hybrid cultivar) 415) Segregating population 420) Mutant/genetic stock 500) Advanced/improved cultivar 999) Other (Elaborate in REMARKS field)	
I/21. Ancestral data	(ANCEST)
Information about either pedigree or other description of ancestral information (i.e. parent variety in case of mutant or selection).	
Example: Hanna/7*Atlas//Turk/8*Atlas	
Example: mutation found in Hanna	
Example: selection from Irene	
Example: cross involving amongst others Hanna and Irene	
I/22. Collecting/acquisition source	(COLLSRC)
The coding scheme proposed can be used at 2 different levels of detail: either by using the general codes (in boldface) such as 10, 20, 30, 40 or by using the more specific codes such as 11, 12 etc.	
10) Wild habitat 11) Forest/woodland 12) Scrubland 13) Grassland 14) Desert/tundra 15) Aquatic habitat 20) Farm or cultivated habitat 21) Field 22) Orchard 23) Backyard, kitchen or home garden (urban, peri-urban or rural)	

24) Fallow land 25) Pasture 26) Farm store 27) Threshing floor 28) Park 30) Market or shop 40) Institute, Experimental station, Research organization, Genebank 50) Seed company 60) Weedy, disturbed or ruderal habitat 61) Roadside 62) Field margin 99) Other (Elaborate in REMARKS field)	
I/23. Donor institute code FAO Institute Code for the donor institute.	(DONORCODE)
I/24. Donor accession number Number assigned to an accession by the donor. Example: NGB1912	(DONORNUMB)
I/25. Other identification (numbers) associated with the accession Any other identification (numbers) known to exist in other collections for this accession. Use the following system: INSTCODE:ACCENUMB;INSTCODE:ACCENUMB;... INSTCODE and ACCENUMB follow the standard described above and are separated by a colon. Pairs of INSTCODE and ACCENUMB are separated by a semicolon without space. When the institute is not known, the number should be preceded by a colon. Example: NLD037:CGN00254 Example: SWE002:NGB1912;:Bra2343	(OTHERNUMB)
I/26. Location of safety duplicates FAO Institute Code of the institute where a safety duplicate of the accession is maintained. The codes consist of the 3-letter ISO 3166 country code of the country where the institute is located plus a number.	(DUPLSITE)
I/27. Type of germplasm storage If germplasm is maintained under different types of storage, multiple choices are allowed (separated by a semicolon). (Refer to FAO/IPGRI Genebank Standards 1994 for details on storage type.) 10) Seed collection 11) Short term 12) Medium term 13) Long term 20) Field collection 30) <i>In vitro</i> collection (Slow growth) 40) Cryopreserved collection 99) Other (elaborate in REMARKS field)	(STORAGE)
I/28. Remarks The remarks field is used to add notes or to elaborate on descriptors with value 99 or 999 (=Other). Prefix remarks with the field name they refer to and a colon. Separate remarks referring to different fields are separated by semicolons without space. Example: COLLSRC:roadside	(REMARKS)
I/29. Decoded collecting institute Brief name and location of the collecting institute. Only to be used if COLLCODE can not be used since the FAO Institution Code for this institute is not (yet) available.	(COLLDESCR)

Example: Tuinartikelen Jan van Zomeren, Arnhem, The Netherlands	
I/30. Decoded breeding institute	(BREDESCR)
Brief name and location of the breeding institute. Only to be used if BREDCODE can not be used since the FAO Institution Code for this institute is not (yet) available.	
Example: CFFR from Chile	
I/31. Decoded donor institute	(DONORDESCR)
Brief name and location of the donor institute. Only to be used if DONORCODE can not be used since the FAO Institution Code for this institute is not (yet) available.	
Example: Nelly Goudwaard, Groningen, The Netherlands	
I/32. Decoded safety duplication location	(DUPLDESCR)
Brief name and location of the institute maintaining the safety duplicate. Only to be used if DUPLSITE can not be used since the FAO Institution Code for this institute is not (yet) available.	
Example: Pakhoed Freezers inc., Paramaribo, Surinam	
I/33. Accession URL	(ACCEURL)
URL linking to additional data about the accession either in the holding genebank or from another source.	
Example: www.cgn.wageningen-ur.nl/pgr/collections/passdata.asp?accenumb=CGN04848	
I/34. Duration of plant breeders rights	(BREEDRIGHTS)
Period of plant breeders rights duration. Use the following system: YYYYMMDD- YYYYMMDD	
Example: 1995.01.01-2020.12.31	
I/35. Plant Variety Lists where accession is included	(VARLISTS)
Example: Latvia Plant Variety List	

II ACCESSION MANAGEMENT, MULTIPLICATION/REGENERATION DESCRIPTORS

Descriptor code	Descriptor scale (score)	Reference values	Reference varieties	Remarks
II/1	Number of times accession regenerated			
II/2	Patent status			
	0 Non-patented cultivar			
	1 Patented cultivar			
II/3	Number of plants sampled			
				Approximate number of plants collected (sampled) in the field to produce this accession.
II/4	Nature of vegetative sample			
	0 Not vegetative (seed)			
	1 Cuttings - for grafting			
	2 Cuttings - for rooting			
	3 Rooted plants			
	4 Tissue culture			
	5 Other (specify in NOTES descriptor, II/11)			
II/5	Virus disease status (including mycoplasma)			
	1 Virus disease free**			** Record results of virus tests in the NOTES descriptor, II/11 (positive or negative).
	2 Virus disease tested (infected)**			
	3 Not tested			
II/6	End use			
	1 Scion cultivar – processing			
	2 Dual or multipurpose consumption			
	3 Clonal rootstock			
	4 Clonal interstock			
	5 Seedling rootstock			
	6 Ornamental/pollinator (pollinizer)			
	7 Botanical (wild) species			

	8	Other (specify in NOTES descriptor, II/11) for example 'valuable unnamed selections from a breeding programme'			
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II/7	Other notes from collector			
				Collectors should record ecological/climatic information. For cultivated crops, cultivation practices should be recorded.

II/8	Rootstock			
				Name of rootstock on which accession is grafted, if any.

II/9	Condition of tree			
	1	Dead		
	2	Dying		
	3	Old – declining		
	4	Mature – diseased		
	5	Mature - non-vigorous		
	6	Mature – vigorous		
	7	Young - not yet bearing		
	8	Other (specify in NOTES descriptor, II/11)		

II/10	Propagation method			
	1	Grafting (including budding)		
	2	Hardwood cuttings		
	3	Softwood cuttings		
	4	Stool beds		
	5	Layering		
	6	Micropropagation		
	7	Seed		
	8	Other (specify in NOTES descriptor, II/11)		

II/11	Notes			

III CHARACTERIZATION AND EVALUATION DESCRIPTORS

Descriptor code	Descriptor scale (score)	Reference values	Reference varieties	Remarks
	PLANT VEGETATIVE CHARACTERS			
III/1	Plant habit:			
	1 prostrate shrub			
	2 decumbent shrub			
	3 semi-erect shrub			
	4 erect shrub			
	5 shrub with a few main trunks	higher than wide		
	6 shrub with one main trunk	higher than wide		
	7 tree			
III/2	Shoot: branching			
	1 absent or very few	>39 cm		
	3 few	30–39 cm		
	5 medium	20–29 cm		
	7 many	10–19 cm		
	9 very many	< 10 cm		
III/3	Shoot: thorns on dormant one-year –old shoot			
	1 Absent			
	3 Few	0.1-2		
	5 Medium	2.1-4		
	7 Many	4.1-6		
	9 Very many	>6		
III/4	Shoot: thorns on two-year –old shoot			
	1 Absent			
	3 Few	0.1-1		
	5 Medium	1.1-2		
	7 Many	2.1-3		
	9 Very many	>3		
III/5	Thorns			
	1 absent			
	2 Short slender thorns	< 10 mm		
	3 Long slender thorns	>= 10 mm		
	4 Short thick thorns	<10 mm		
III/6	Shoot: epidermis on an one-year -old shoot			
	1 glabrous			
	2 Covered with scabrous tomentum			

	3	pubescent			
III/7	Shoot: epidermis on a two-year -old shoot				
	1	glabrous			
	2	verruculose			
III/8	Leaf: blade length				
	3	short			
	5	Medium			
	7	long			
III/9	Leaf: blade width				
	3	Narrow			
	5	medium			
	7	wide			
III/10	Leaf: blade ratio				
	3	Small			
	5	medium			
	7	large			
III/11	Leaf: shape				
	1	Lanceolate	<i>C.cathayensis</i> , <i>C.thibetica</i>		
	2	narrowly elliptic	<i>C.speciosa</i>		
	3	Elliptic	<i>C.japonica</i>		
	4	obovate	<i>C.japonica</i>		
III/12	Leaf: apical angle				
	1	Obtuse	$> 90^0$		
	2	acute	Between $45-90^0$		
	3	acuminate	$< 45^0$		
III/13	Leaf: margin shape				
	1	Coarsely crenate	<i>C.japonica</i>		
	2	doubly serrate	<i>C.speciosa</i>		
	3	Serrate with irregular spacing	<i>C.cathayensis</i>		
	4	Doubly serrate with irregular spacing	<i>C.thibetica</i>		
III/14	Leaf: tooth apex shape				
	1	Cuspidate	<i>C.japonica</i> , <i>C.speciosa</i>		
	2	obtuse	<i>C.japonica</i> , <i>C.speciosa</i>		
	3	acute	<i>C.cathayensis</i> , <i>C.thibetica</i>		
	4	acuminate	<i>C.cathayensis</i> , <i>C.thibetica</i>		
III/15	Flower: cluster				
	1	single	1 bud		
	3	few	2-3 buds		
	5	medium	4-5 buds		
	7	many	6-7 buds		
	9	Very many	> 7 buds		
III/16	Flower: petals				
	1	Free			

	2	touching			
	3	overlapping			
III/17	Flower: petal shape				
	1	circular			
	2	Transversely oblong			
	3	elliptic			
	4	obovate			
	5	Widely obovate			
	6	other			
III/18	Flower: petal's degree of concavity				
	1	flat			
	5	Shallowly concave	Tear shorter than half of the petal		
	9	Deeply concave	Tear longer than half of the petal		
III/19	Flower: diameter				
	1	very small	< 4 cm		
	3	Small	4.0 – 4.4. cm		
	5	Medium	4.5 – 4.9 cm		
	7	large	5.0 – 5.5 cm		
	9	Very large	>5.5 cm		
III/20	Flower: form				
	1	single			
	2	Double			
	3	filled			
III/21	Flower: colour				
	1	White			
	3	pink			
	5	orange			
	7	red			
	9	dark red			
III/22	Flower: colour code				
III/23	Flower: percentage of imperfect flowers				
	1	very low	<5 %		
	2	very low to low	5-9 %		
	3	low	10-19 %		
	4	Low to medium	20-29 %		
	5	Medium	30-39 %		
	6	Medium to high	40-49 %		
	7	High	50-59 %		
	8	High to very high	60-69 %		
	9	Very high	>70 %		
		FRUIT AND SEED CHARACTERS			
III/24	Fruit: ratio length/width				
	1	very small			
	3	small			
	5	medium			
	7	Large			
	9	very large			

III/25	Fruit: average fresh weight measured in g			
	1	very low	0-9 g	
	2	very low to low	10-19 g	
	3	low	20-29 g	
	4	Low to medium	30-39 g	
	5	Medium	40-49 g	
	6	Medium to heavy	50-59 g	
	7	Heavy	60-69 g	
	8	Heavy to very heavy	70-79 g	
	9	Very heavy	>80 g	
III/26	Fruit: ratio of area of locules / area of fruit flesh			
	1	very small		
	3	small		
	5	medium		
	7	large		
	9	very large		
III/27	Fruit: number of locules			
	3	Few	<5	
	5	medium	5	
	7	many	>5	
III/28	Fruit: shape, vertical cross-section			
	1	Circular		
	2	oblate		
	3	oblong		
	4	Ovate		
	5	pyriform		
	6	irregular		
III/29	Fruit: ribbing, horizontal cross-section			
	1	Absent		
	2	weak		
	3	strong		
III/30	Fruit: ground colour at maturity			
	1	Green		
	2	Yellowish green		
	3	yellow		
III/31	Fruit: amount of over colour			
	1	absent		
	3	Low		
	5	medium		
	7	high		
III/32	Fruit: over colour			
	1	Absent		
	2	Orange		
	3	pink		
	4	red		
	5	Greenish red		
	6	green		
III/33	Fruit: greasiness of skin			
	1	Absent		
	2	Weak		

	3	strong			
III/34	Fruit: easiness of picking at the time of maturity				
	1	Very loose	Fruit drops by itself when ripe		
	3	Quite loose			
	5	medium			
	7	hard			
	9	Very hard	Almost impossible to pick without injuring the branch		
III/35	Seed: number				
	3	small	<60		
	5	Medium	60-80		
	7	large	>80		
III/36	Seed: length				
	3	short	<6 mm		
	5	Medium	6-7 mm		
	7	long	>7 mm		
III/37	Seed: dry weight				
		To be measured by 100 seeds of each clone			
III/38	Seed: share				
	3	Small	< 6 %		
	5	Medium	6-10%		
	7	large	> 10 %		
III/39	Seed: colour				
	1	White			
	2	Very light brown			
	3	light brown			
	4	brown			
	5	Dark brown			
	PHENOLOGICAL DATA				
III/40	Time of leaf bud burst				
III/41	Time of beginning of flowering				
III/42	Duration of flowering				
III/43	Time of fruit maturity				
III/44	Time of leaf fall				
	PRODUCTION				
III/45	Yield				
	1	Very low			
	3	Low			
	5	medium			
	7	high			
	9	Very high			

	SUSCEPTIBILITY TO ENVIRONMENTAL STRESS, PESTS AND DISEASES			
III/46	Susceptibility to winter frost			
	Proportion of damaged shoots and buds, %			
	1 not (resistant)	0 %		
	2 very small	< 5%		
	3 small	6 - 25 %		
	5 medium	26 - 50 %		
	7 strong	51 - 75 %		
	9 very strong (susceptible)	76 - 100%		
III/47	Susceptibility to spring frost			
	Proportion of damaged buds and flowers, %			
	1 not (resistant)	0 %		
	2 very small	< 5%		
	3 small	6 - 25 %		
	5 medium	26 - 50 %		
	7 strong	51 - 75 %		
	9 very strong (susceptible)	76 - 100%		
III/48	Susceptibility to pests			
	Proportion of damaged leaves, flowers and fruits, %			
	1 not (resistant)	0 %		
	2 very small	< 5%		
	3 small	6 - 25 %		
	5 medium	26 - 50 %		
	7 strong	51 - 75 %		
	9 very strong (susceptible)	76 - 100%		
III/49	Susceptibility to leaf spots			
	Proportion of damaged leaves, %			
	1 not (resistant)	0 %		
	2 very small	< 5%		
	3 small	6 - 25 %		
	5 medium	26 - 50 %		
	7 strong	51 - 75 %		
	9 very strong (susceptible)	76 - 100%		
III/50	Susceptibility to grey mold (<i>Botrytis cinerea</i>)			
	Proportion of damaged fruits, %			
	1 not (resistant)	0 %		
	2 very small	< 5%		
	3 small	6 - 25 %		
	5 medium	26 - 50 %		
	7 strong	51 - 75 %		
	9 very strong (susceptible)	76 - 100%		
III/51	Susceptibility to fruit rot (<i>Monilia fructigena</i>)			
	Proportion of damaged fruits, %			
	1 not (resistant)	0 %		
	2 very small	< 5%		

	3	small	6 - 25 %		
	5	medium	26 - 50 %		
	7	strong	51 - 75 %		
	9	very strong (susceptible)	76 - 100%		
	BIOCHEMICAL CONTENT OF FRUITS				
III/52	Content of phenolic compounds				
	1	very low			
	3	low			
	5	medium			
	7	high			
	9	very high			
III/53	Content of ascorbic acid				
	1	very low			
	3	low			
	5	medium			
	7	high			
	9	very high			
III/54	Total content of organic acids				
	1	very low			
	3	low			
	5	medium			
	7	high			
	9	very high			
III/55	Content of soluble solids				
	1	very low			
	3	low			
	5	medium			
	7	high			
	9	very high			